September, 1956

SOAP and Chemical Specialties

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On this issue...

ecialties chalk up huge ins census figures show

• • •

beling insecticides and sinfectants -- the 'musts'

• • •

e newer polymers secret improving floor waxes?

• • •

end to 'safety solvents' en in engine degreasers

Just turned 55, Adrien C. Pelletier, president of 26-year-old Purex Corp., has seen the firm grow from a three-man, garage-based bleach plant to an operation having 18 plants in 12 cities in U. S. and Canada. Purex entered detergent field after World War II, last year bought "Old Dutch Cleanser," and this year Manhattan Soap.

For Your Polyethylene Packaged Cosmetics

Tested Custom-Built Fragrances

Have you wanted to package your cosmetic product in practical, light weight polyethylene . . . but feared the effect of fragrance materials upon it? The D&O Perfume Laboratories have just completed a research project aimed at determining the permeation rate of its entire repertoire of raw materials and finished compositions. This work, resulting in the accumulation of data concerning ingredient weight loss and container deformation has enabled D&O to develop fragrances which can be offered with confidence to the cosmetic industry for use in polyethylene packaged cosmetics, including anti-perspirant sprays, creams, lotions and shampoos. Individual development will be done with your polyethylene packaged product in the D&O Perfume Laboratories. Consult D&O.

Essentially for You

Write for copy of D&O Bulletin . . . No. 3.
"Fragrances for Polyethylene Packaged Cosmetics"

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DODGE & OLCOTT, INC.

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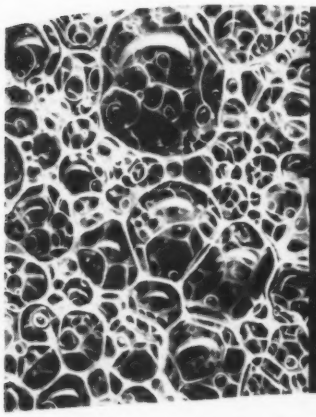
PILOT

HD-90

FOR MORE DETERGENT SUDS PER DOLLAR



PILOT HD-90 DETERGENT contains less sulfate and more active ingredient than any other product at competitive prices

PILOT HD-90 is odorless, dust-free, dry flowing and whiter in color

PILOT HD-90 is cold processed, high active Alkyl Aryl Sulfonate; 90% minimum active drum dried flake

More detergent suds *immediately* increase consumer acceptance for your product! Every micelle produced in solution from Pilot HD-90 is homogeneously effective for uses such as household sudsers, industrial detergents and scouring powders. Cold processing eliminates odors, undesirable oils, stickiness and other bad characteristics from molecular rearrangement and side reactions. Pilot HD-90's high quality in the making and mixing of dry products is equally applicable to the manufacture of liquid detergents. Pilot HD-90's concentrated and low sulfate properties minimize filtering; give liquids the highest sudsing and cleansing powers obtainable. Write for formulas and samples. *Only Pilot HD-90 Detergent features this premium quality at competitive prices!*

LEADS THE WAY TO BETTER PRODUCTS
PILOT

Packed in polyethylene lined fibre drums and 5-ply paper bags.

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Dodecyl Benzene Sulfonates
Sodium Toluene Sulfonate

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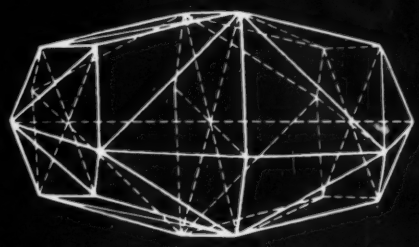

sequestrants take a new form

NON-HYGROSCOPIC

PERMA KLEER 80 CRYSTALS

Refined brings you a sequestrant that fulfills a long-felt need for a chelating agent that will not pick up moisture and cake dry powders.

Due to their NON-HYGROSCOPIC nature, no precautions are needed to keep the PERMA KLEER 80 CRYSTALS dry, even in a humid atmosphere.

Because of its high purity and powerful sequestering properties — typical of the Perma Kleer family — smaller amounts are used.

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SOAP and Chemical Specialties

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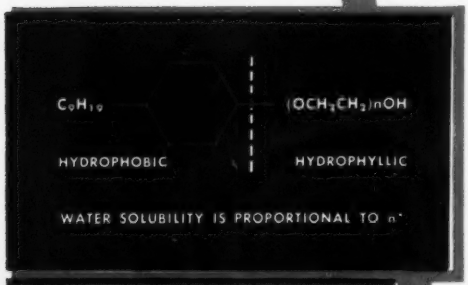
USE AN IGEPAL® CO IN YOUR PROCESS OR PRODUCT

The 8 products that comprise the Igepal CO series of non-ionic surfactants, while chemically alike, are different in ethylene oxide content, solubility and performance characteristics. They are specifically designed and performance tested for use in technical processes and consumer products requiring a stable non-ionic surfactant.

The correct hydrophobic-hydrophyllic balance of any surfactant system is essential to optimum performance. The eight products in the Igepal CO series cover the practical range of hydrophobic-hydrophyllic ratios for nonylphenol to ethylene oxide.

Furthermore, being non-ionic, the Igepals are not limited in their use because of undesired reactions with electrolytes and are stable to hydrolysis by acids and alkalis even at elevated temperatures.

To assist you in planning significant experiments in your product or process, the exact composition of the Igepal CO products are described below. Matched sets of samples are available upon request.



PRODUCT	n*	% ETHYLENE OXIDE	CLOUD POINT, 1% SOLUTION
Igepal CO-210	1½	23	Insoluble in water
Igepal CO-430	4	44	Insoluble in water
Igepal CO-530	6	54	Cloudy at 32° F.
Igepal CO-630	9-10	65	126-133° F.
Igepal CO-710	10-11	68	158-165° F.
Igepal CO-730	15	75	203-212° F.
Igepal CO-850	20	80	Clear at 212° F.
Igepal CO-880	30	86	Clear at 212° F.

*Moles of ethylene oxide per mole of nonylphenol

IGEPAL CO

SURFACTANTS ARE USED IN PRODUCTS OR PROCESSES FOR:

AGRICULTURE
BUILDING
CHEMICAL MANUFACTURING
DETERGENT COMPOUNDING
COSMETICS
DAIRY
LEATHER
METALS
PAPER
PLASTICS
PETROLEUM
TEXTILE
RUBBER

To indicate the wide range of performance characteristics available with Igepal CO surfactants, some typical uses are shown for each product:

IGEPAL CO-210

In high concentrations, serves as defoaming agent in low foaming detergents.
In low concentrations, acts as foam stabilizer for high foaming detergents.
Co-emulsifier in non-ionic surfactant blends.
Defoaming agent in cold water cleaners.
Oil soluble detergent and dispersing agent for use in petroleum oils.

IGEPAL CO-430

Oil soluble emulsifying agent.
Intermediate in the synthesis of high foaming, water soluble sulfate esters.
Oil soluble detergent and dispersing agent for use in petroleum oils.

IGEPAL CO-530

De-inking of paper.
Emulsifier for silicones and agricultural chemicals.
Oil soluble surfactant and emulsifying agent.
Detergent and dispersing agent for use in petroleum oils.

IGEPAL CO-630

Surfactant for use in all phases of textile processing.
Fast rinsing surfactant for cleaning paper machine felts.
Rewetting agent for paper towels and tissues.
Wetting agent in hide soaking and penetrant in fat liquors.
Surfactant for household and industrial cleaning formulations.
Wetting agent for use with mineral acids and corrosion inhibitors.

IGEPAL CO-710

Can be used interchangeably with Igepal CO-630 in most applications, and is particularly effective when higher temperatures are employed.

Highly efficient textile detergent in neutral, acid and alkaline media.
Surfactant in heavy duty liquid detergent formulations and in controlled suds laundry and household formulations.

IGEPAL CO-730

Surfactant for high temperature general detergency, and dispersing.
Emulsifying agent for fats, oils and waxes.
Penetrating and wetting agent in caustic solutions.
Surfactant for use with high concentrations of electrolytes.
Wetting agent for use with mineral acids and corrosion inhibitors.

IGEPAL CO-850

Surfactant for high temperature general detergency and dispersing.
Wetting agent in high concentrations of electrolytes.
Emulsifying agent for fats, oils and waxes.
Stabilizer for synthetic latices.

IGEPAL CO-880

Detergent for high temperature scouring of textiles in pressure equipment.
Stabilizer for synthetic latices.
Surfactant for high temperature general detergency and dispersing.
Emulsifying agent for fats, oils and waxes.
Wetting agent in high concentrations of electrolytes.

MANY APPLICATIONS REQUIRE A MIXTURE OF BOTH AN OIL-SOLUBLE AND WATER-SOLUBLE NON-IONIC SURFACTANT. IN SUCH CASES WE SUGGEST THE USE OF AN IGEPAL HAVING A LOW ETHYLENE OXIDE CONTENT IN COMBINATION WITH ONE HAVING A HIGH ETHYLENE OXIDE CONTENT. THIS WILL GIVE IMPROVED EMULSION STABILITY OVER A WIDER TEMPERATURE RANGE.

For assistance on complex surfactant problems, our technical staff is always available for consultation.
Technical literature on the Igepal CO surfactants will be supplied upon request. Prompt shipments can be made from warehouse stocks maintained at branch offices.

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Igepal CO surfactants manufactured by General Aniline & Film Corp. are sold outside the United States under the trademark "Antarox CO".

In Colgate's New Advanced Detergent

THE KEY IS CMC

"Specially created to wash clothes super-clean and sparkling white"—That's the claim made for Colgate's new AD, and Hercules® CMC is part of the formulation to see that the promise is fulfilled.

CMC's exceptional soil-suspending properties insure that dirt particles always leave with the rinse water, are never redeposited on the clothes. That leaves this new advanced detergent free to do a thorough and efficient job of loosening even deeply imbedded dirt. CMC does the rest.

From special preparations created for commercial laundries to formulations for home use, leading manufacturers have learned that economical CMC can improve their product, increase customer satisfaction. If you haven't explored the advantages CMC holds for you, we'll be glad to send you technical information and a testing sample. Just write Hercules.

THREE SEPARATE SIZES, ranging from the giant 16-pound box to the 1½-pound container, make AD available to suit every convenience. This new advanced detergent, a product of the Colgate-Palmolive Company, provides "just right suds" for automatic washers.

Virginia Cellulose Department

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PAINT, WALL, METAL and SURFACE CLEANERS
TEOX 120 substantially enhances the effectiveness of these cleaners.
DETERGENT COMPOUNDS FOR HOME and COMMERCIAL LAUNDRY APPLICATIONS
TEOX 120, blended with phosphates and other materials (REQUEST DATA SHEET) produces controlled sudsing detergents of high efficiency . . . in hard or soft water.
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TEOX120 is an excellent scouring and wetting agent for textile fabrics and yarns.
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Teox® 120
BLOCKSON'S NONIONIC SURFACTANT
DE-DUSTING
TEOX 120, in small concentrations, minimizes dusts in detergent mixes and improves cleaning properties.
A neutral liquid 100% active water-and-oil soluble emulsifier, penetrant and wetting agent that promotes detergency.
EMULSIFYING AGENT AND DISPERSANT
TEOX 120, as an emulsifier in insecticidal preparations, also enhances adhesion and wetting properties.

BLOCKSON

BLOCKSON CHEMICAL COMPANY
Division of Olin Mathieson Chemical Corporation
JOLIET, ILLINOIS

MAIL THIS COUPON WITH YOUR BUSINESS LETTERHEAD
BLOCKSON CHEMICAL COMPANY · JOLIET, ILL.

☐ Send data sheet on TEOX 120 ☐ Include testing sample
☐ Send bulletin on detergent compounds incorporating TEOX 120.

*Name*_____ *Title*_____

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*City*_____ *Zone*____ *State*_____

Are you searching for an honest appraisal **to guide you as a private brand distributor**

Beauty and Durability

Initial appearance is important, but for a waxed surface to remain beautiful, it must be durable. Durability depends not only on resistance to abrasion of traffic, but even more so on resistance to discoloring marks. Durability should be measured by how long the waxed surface maintains a nice appearance before complete removal and re-waxing is required.

Anti-Slip

Anti-slip, or reasonable safety underfoot, does not mean that the qualities of beauty and protection need be sacrificed. The proper balance—a wax film which is not excessively slippery, yet which is not tacky and does not collect dirt readily—gives the performance that answers the foremost original reason for use of a floor wax... beauty and protection.

Water Resistance

Frequent damp mopping or wet traffic can make water resistance very important. Overdoing this quality when no problem exists out of the ordinary, simply increases the difficulty of complete removal or applying multiple coats. Removability must be considered as important as water-resistance under most normal conditions.

Solid Content

The percentage of solid content is not nearly as important as the **quality** of the solids. Good quality indicates 12% of solids as the answer for most well planned maintenance programs. Two applications of 12% gives better results than one of 18%. "Washed out" floors and other special problems maintain better when more concentrated waxes are used. Over-waxing and resultant greater difficulty in removal for periodic maintenance may do more harm than good.

Carnauba Wax

The most important features of a good wax ...all-around quality of performance...are built around Carnauba Wax. When refined and compounded with other additives and scientifically controlled in manufacture, Carnauba alone imparts the beauty and protection that makes the use of floor waxes both profitable and possible. Make-shift manufacture or over-emphasis on any one given quality most certainly will lead to unsatisfactory performance.

SELF-POLISHING WAXES

Each of Candy's floor waxes are all-around top quality for certain traffic conditions. They impart the finest protection and beauty to floors for which best suited.

CANDY'S SUPREME (standard)
BRIGHT BEAUTY® (standard)
CANDY'S SUPREME Special WR
SUPER CAND-DOX®
CAND-DOX® #CS
CAND-DOX® #BB

All Candy's products are available for private brand resale and are sold only through distributors except for experimental accounts in Chicago essential to research.

Other HIGHEST QUALITY wax products by CANDY & COMPANY

Bright Beauty WAX REMOVER & all-purpose SURFACE CLEANER
For removal of water-emulsion waxes from any floor without harmful effects. It is the perfect maintenance program wax remover and all-purpose surface cleaner. Pleasant odor, crystal clear color and thorough cleaning action with all types of equipment. Unaffected by hard freezing. Furnished ready for resale or in concentrated form for local packaging...nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH
A cream furniture polish that spreads easily, polishes without excessive effort to a deep impressive lustre. Permits repeated repolishing with a dry cloth, thus saving many re-applications. A very economical polish of the very highest quality.

Bright Beauty PASTE WAX
Properly blended and refined from excellent quality solids and solvents that produce the best drying time and evaporation. Easy to handle, having "creamy" consistency and stability that lasts throughout storage and usage life.

Bright Beauty LIQUID (spirit) PREPARED WAXES
A complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each acts as a "dry cleaner" to keep surfaces waxed protected with a superb coating necessary for many applications such as wood and certain other types of floors; for bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH
As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass. Different in color only as a Silver Polish, it polishes to a high lustre *without* abrasion and can even correct the abuses of scratchy "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX
Does not "ball-up" and gather dirt that impregnates floors with hard spots difficult to remove...free from dusty effects. Its protective quality adds more "floor-years" to expensive ballroom floors.

Bright Beauty Heavy Duty PASTE CLEANER
Cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive qualities, it frees almost every surface from all foreign matter.

CONTAINER SILK SCREEN LABELING
Now you can have dramatic, colorful labeling of your private brand name on all 55, 35, 30, 20 & 15 gal. drums and 5 gal. pails. This added service is accomplished right in our plant...your inspection invited...or write for details.

Wax Specialists for over 65 years

Candy & Company, Inc.

2515 W. 35th ST., CHICAGO

You Can See that it is Low in Iron and Turbidity!

Add SOLVAY Flake Caustic Potash to water and note the clarity of the solution. You can actually *see* the extraordinary purity of SOLVAY's technical product. You can see that it's lowest in iron—lowest in turbidity. These outstanding properties clearly indicate easier processing, greater economy and higher quality finished products at lower unit cost.

PROVE IT TO YOURSELF. Write for a free sample. Put it to the test. Compare it with the brand you are now using. Prove to yourself that SOLVAY Flake Caustic Potash is the finest technical grade you can buy—anywhere. And, SOLVAY quality costs no more.

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Aluminum Chloride • Vinyl Chloride
Potassium Carbonate • Calcium Chloride
Sodium Nitrite • Soda Ash • Snowflake® Crystals • Chlorine
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Methylene Chloride • Monochlorobenzene • Ammonium Bicarbonate
Carbon Tetrachloride • Methyl Chloride • Cleaning Compounds • Caustic Soda
Para-dichlorobenzene • Ortho-dichlorobenzene • Hydrogen Peroxide • Chloroform

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SOLVAY PROCESS DIVISION
Allied Chemical & Dye Corporation
61 Broadway, New York 6, N. Y.

Gentlemen: Please send me the following *at no cost or obligation**.

Samples: ☐ Solid ☐ Flake ☐ Small Flake ☐ Liquid

☐ FREE BOOK—"Caustic Potash and Potassium Carbonate"

*In Western Hemisphere Countries Only.

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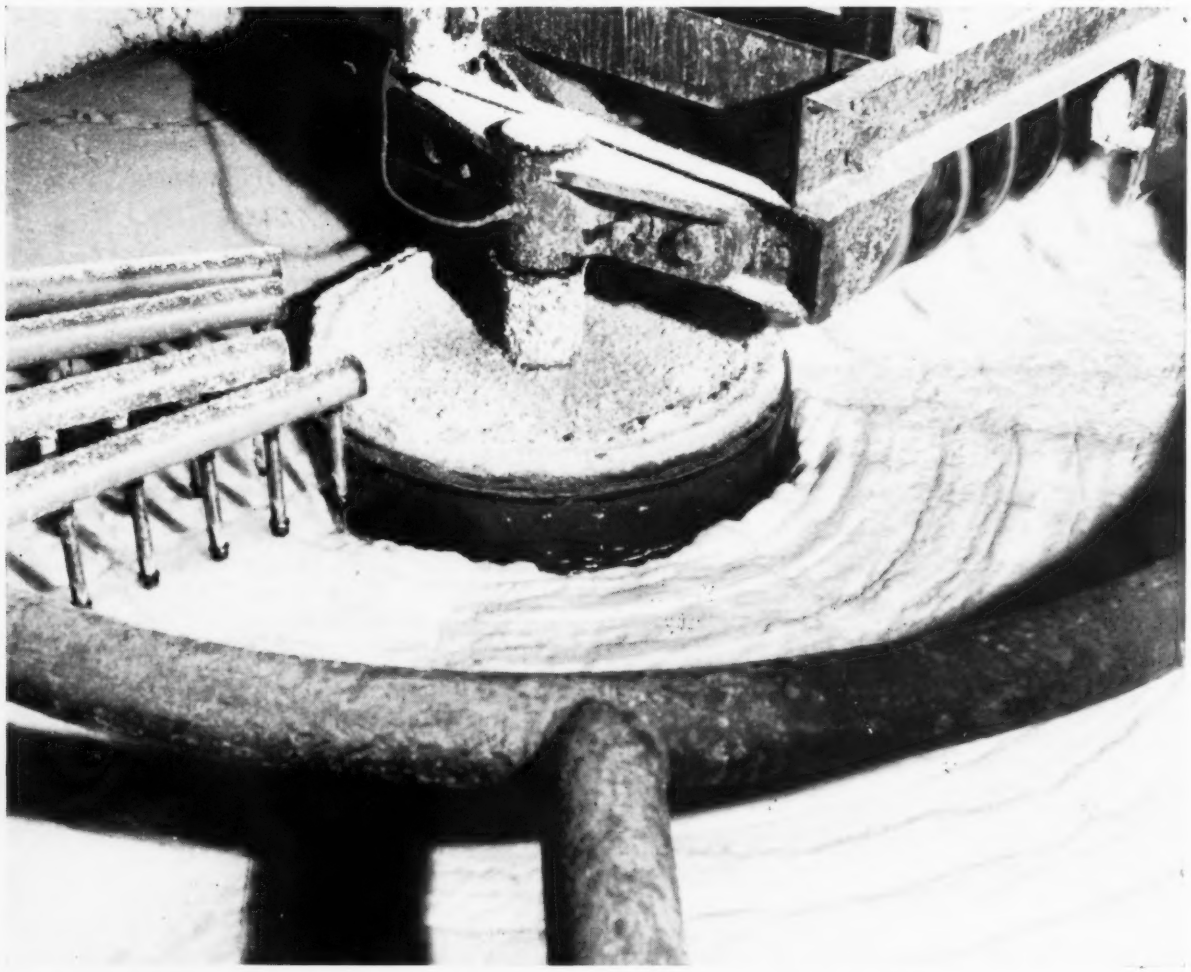
West End doubles capacity of sodium sulfate plant

Acceptance of West End Sodium Sulfate has spread so rapidly that we are enlarging our plant to produce over 100,000 tons a year. Even at this rate we are tapping less than 50% of our natural raw material supply. This output and reserve provides industry with a dependable source of highest quality sodium sulfate to serve its growing needs. Samples, prices and freight schedules will be submitted gladly on request. Please include specifications.



WEST END **West End Chemical Company**

SODA ASH • BORAX • SODIUM SULFATE • SALT CAKE • HYDRATED LIME

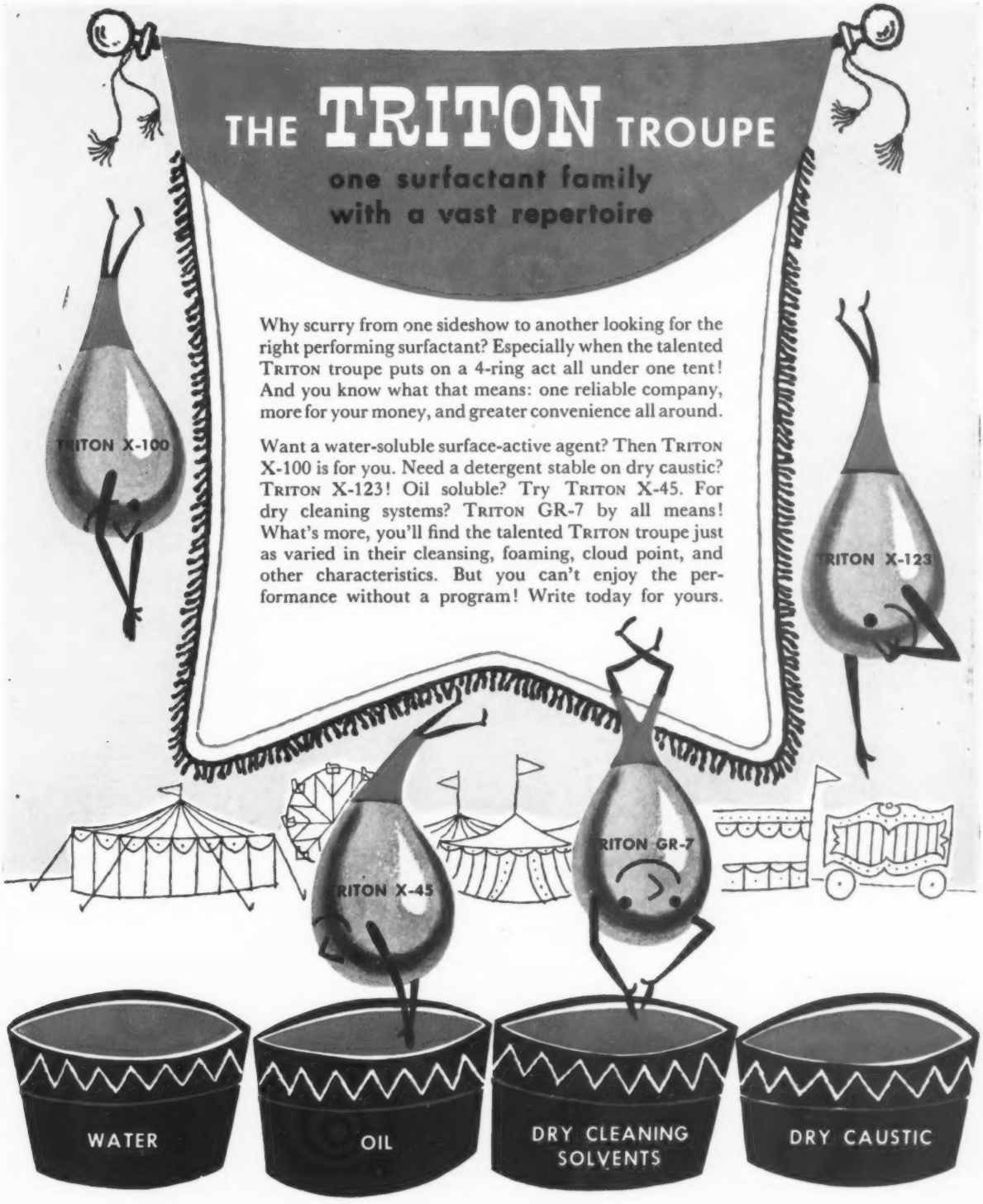
EXECUTIVE OFFICES, 1956 WEBSTER, OAKLAND 12, CALIFORNIA • PLANT, WESTEND, CALIFORNIA

THE TRITON TROUPE

one surfactant family with a vast repertoire

Why scurry from one sideshow to another looking for the right performing surfactant? Especially when the talented TRITON troupe puts on a 4-ring act all under one tent! And you know what that means: one reliable company, more for your money, and greater convenience all around.

Want a water-soluble surface-active agent? Then TRITON X-100 is for you. Need a detergent stable on dry caustic? TRITON X-123! Oil soluble? Try TRITON X-45. For dry cleaning systems? TRITON GR-7 by all means! What's more, you'll find the talented TRITON troupe just as varied in their cleansing, foaming, cloud point, and other characteristics. But you can't enjoy the performance without a program! Write today for yours.



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Chemicals for Industry

ROHM & HAAS COMPANY

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The scent of soap
can be an impelling spur to sales

Tell your story well through the selection of the proper perfume. For suggestions and recommendations, ask the advice of the van Ameringen-Haebler soap perfumers who are unmatched in skill and experience in this field of scent.

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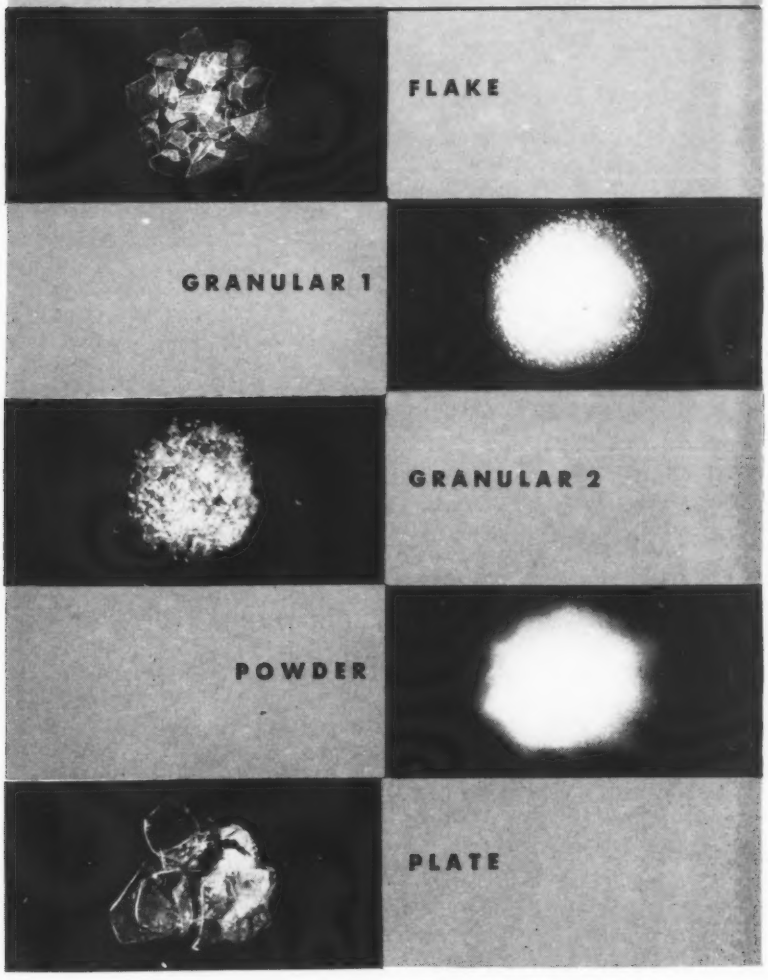
Exclusive!

Sodium Hexametaphosphate in five highly soluble forms

WESTVACO HEXAPHOS®



A true glassy phosphate that is essentially neutral (pH 6.7–7.2) and extremely soluble, Westvaco HEXAPHOS can be used in highly concentrated solutions . . . frequently a money-saving advantage where stock solutions are being fed. Westvaco HEXAPHOS contains optimum phosphorus pentoxide for maximum sequestering and water-softening effectiveness.

Backed by our production of elemental phosphorus at Pocatello, Idaho, Westvaco has completely integrated HEXAPHOS output at both Carteret, New Jersey and Newark, California. Thus, we provide uniformly high quality, dependable supply and fast delivery *to points East or West.*

P.S. We can also furnish other glassy sodium phosphates with various Na_2O–P_2O_5 ratios to meet special requirements. A letter outlining your needs will enable us to give you detailed information.

Westvaco® CHEMICALS

Westvaco Mineral Products Division
FOOD MACHINERY AND CHEMICAL CORPORATION
161 E. 42nd St., New York 17 • Chicago Cincinnati Houston Philadelphia Newark, Calif.

fmc FOOD MACHINERY AND CHEMICAL CORPORATION®

FMC CHEMICALS INCLUDE: BECCO *Perozygen Chemicals* • WESTVACO *Alkalis, Chlorinated Chemicals and Carbon Bisulfide* • NIAGARA *Insecticides, Fungicides and Industrial Sulphur* • OHIO-APEX *Plasticizers and Chemicals* FAIRFIELD *Pesticide Compounds and Organic Chemicals* • WESTVACO *Phosphates, Barium and Magnesium Chemicals*

Check

your home-laundry dry bleach requirements

Only HALANE can give your product these 4 big advantages . . .

Safety!

Halane is safe on cotton, nylon, rayon and acetate. Even if solid Halane were added directly to clothes of these fibers, it would not injure the fabrics. In 20-cycle laundry tests, clothes bleached with Halane showed only a 2% loss in tensile strength, compared with a 10% loss suffered with ordinary hypochlorite bleaching methods. Halane bleaching powders can be safely packaged in either glass containers or cardboard boxes.

Controlled Bleaching!

The bleaching ingredient (active hypochlorous acid) is released from Halane at a controlled rate – depending upon individual bleaching conditions.

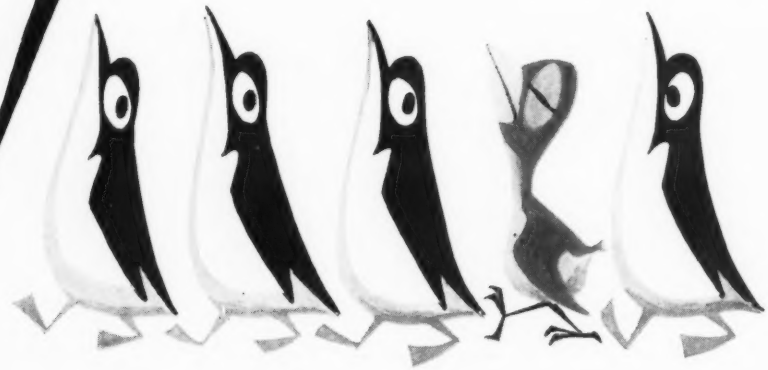
Bleaching Effectiveness!

Even badly stained or grayed fabrics come out whiter after a Halane bleach. Halane will not form curds and is completely compatible when used along with synthetic detergents or soaps. It can be used in the soak, wash, or rinse cycles.

Economy!

Halane is the most widely used organic, chlorine-bearing base for dry bleaches in the home-laundry field. As a result of this volume, and greater production economies, Halane is now available at new low prices . . . send for a Halane price schedule.

Our skilled chemists and engineers . . . modern research laboratories . . . and 65 years' experience as a leading producer of chemicals are at your service. For help in planning a formulation for the home-laundry market, send for the new Halane data sheet. *Wyandotte Chemicals Corporation, Dept SCS-9, Wyandotte, Michigan. Offices in principal cities.*



WYANDOTTE CHEMICALS

MICHIGAN ALKALI DIVISION

HEADQUARTERS FOR ALKALIES

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA • CHLORINE • MURIATIC ACID • CALCIUM CARBONATE • CALCIUM CHLORIDE • GLYCOLS • CHLORINATED SOLVENTS • SYNTHETIC DETERGENTS • HALANE® • OTHER ORGANIC AND INORGANIC CHEMICALS

For liquid detergent formulations

try the raw material with the world's best references

NEOLENE 400

Neolene 400 is an established high-quality hydrocarbon that has earned a key position, not only with the world's foremost processors, but also with smaller compounders everywhere. Sulfonates produced from Neolene 400 are particularly well suited for compounding in liquid formulations. Latest sulfonation method, using SO_3 with Neolene 400, contributes to quality and production efficiency in liquid formulations. This procedure does away with handling, storing and disposing of spent sulfuric acid.

In addition to Neolene 400, you can count on Conoco for:

WATER-SOLUBLE SULFONATES—produced from Neolene 400. Available as sulfonate slurry, sulfonic acid, or in spray-dried and drum-dried forms.

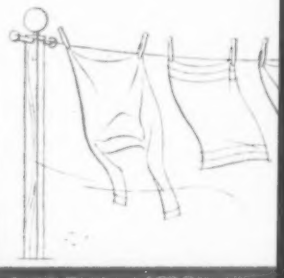
OIL-SOLUBLE SULFONATES—manufactured by sulfonation of synthetically produced hydrocarbon under closely controlled conditions.

CONOCO H-300, a secondary plasticizer for vinyls—outstanding light stability . . . improved low-temperature flexibility . . . viscosity depressant and stabilizer.

TECHNICAL ASSISTANCE— Continental Oil Company is thoroughly experienced in the manufacture and application of sulfonates. Let us help you with your particular problem. Continental Oil Company, Petrochemical Department, Division A9, 630 Fifth Avenue, New York 20, N. Y.—1353 No. North Branch Street, Chicago, Ill.—Export: Airco Company International, 60 East 42nd Street, New York 17, N. Y.

CONOCO Petrochemicals

Petrochemical know-how from the ground up!



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CONTINENTAL OIL COMPANY

Oronite has THE surfactant to fill your individual needs

want detergency?

Whether you require exceptional detergency properties in the basic raw material or from a surfactant in intermediate form or in a finished product—it will pay you to consult Oronite—the world's largest producer of synthetic detergent raw materials. Our extensive technical experience is at your disposal.

want HIGH suds or LOW suds?

Oronite's D-40 finished dry detergent in flake, granule or powder form has excellent foaming power in hard or soft water. D-60 offers you a higher active product. Nonionic Dispersant NI-W is a water soluble, low sudsing product desirable where "foam" is a handicap.

want *rapid,* thorough "wetting"?

D-40, D-60 in dry form, Wetting Agent "S" in paste form and NI-W in liquid form have superior wetting ability. Compare these products with those you are now using—samples are available. Or, tell us your particular needs for "wetting" and we can provide suggested formulations.

want *emulsifying* or dispersing action?

D-40 and D-60 have the ability to emulsify and suspend animal, vegetable, and mineral fats, oils and greases. Oronite's water soluble Dispersant NI-W is completely compatible with soaps, anionic detergents and cationic germicides. Its companion product Dispersant NI-O is an outstanding emulsifier for water-in-oil emulsions.

ORONITE CHEMICAL COMPANY

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20 North Wacker Drive, Chicago 6, Illinois
Mercantile Securities Building, Dallas 1, Texas
Carew Tower, Cincinnati 2, Ohio
714 W. Olympic Blvd., Los Angeles 15, Calif.
450 Mission Street, San Francisco 5, California
36 Avenue William-Favre, Geneva, Switzerland

ORONITE CHEMICAL COMPANY

ORONITE CHEMICAL COMPANY
200 Bush Street, Dept. D
San Francisco 20, California

☐ Please have a detergent specialist call on me regarding our individual requirements.

☐ I desire further information regarding the following properties of Oronite surfactants. ( ) Anionic ( ) Nonionic ( ) Detergency ( ) Sudsing ( ) Wetting ( ) Emulsification

Name_____

Address_____

City_____ Zone____ State_____

After Closing . .

Ultra Sells Wax Division

Muralo Co., New York, has purchased the floor wax division of Ultra Chemical Works, it was announced recently. Included in the sale were production equipment, inventories, and the trade-marked products, "Ultra Gloss," a liquid polish, and "Ultra 400," an industrial floor wax. The sale was made as a result of Ultra's decision to concentrate on the development and production of basic synthetic industrial chemicals. Muralo, a producer of paints and allied products, lists among its brands "Spackle," a patching plaster, and "PVA Mural-Tone," an interior paint.

★

A New Frascinella

Kip Phillip, second child of Lillian and Ted Frascinella, office manager of the Soap Association, was born August 11, at Long Island Jewish Hospital, Glen Oaks, L. I., N. Y. Kip's mother, the former Miss Lillian Zuckerman, was secretary to Roy Peet, manager of the Soap Association before her marriage. The Frascinella's have another boy, Don Alan, who is 3 years old.

★

Ward In New Sales Post

The appointment of William L. Ward to the position of central sales vice-president of Piatt & Smillie Chemicals, Inc., St. Louis, was announced recently by the firm's board of directors. Mr. Ward formerly had been regional sales manager in Chicago and Milwaukee. In his new post, he will negotiate annual supply contracts on behalf of his distributors and organize and coordinate distributor advertising, sales, and service. He will work from the firm's Chicago office.

Mr. Ward joined Piatt & Smillie in 1951 as district sales

William L. Ward

manager in Chicago-Milwaukee and a year later became regional sales manager. Recently he had been temporarily assigned to San Francisco in conjunction with the opening of the company's west coast branch plant there. Mr. Ward attended the University of Wisconsin and Shurtleff College where he majored in business administration.

★

Vulcan Advances Ferguson

Lawrence M. Ferguson has been advanced to sales manager of Vulcan Containers, Inc., Bellwood, Ill., it was announced recently by Herbert B. Scharbach, vice-president for sales. A member of the firm for 18 years, Mr. Ferguson is an authority on interior coatings for steel shipping containers and has been instrumental in the research and development of the company's techniques in varied coatings for the interior of steel shipping pails designed for packaging chemical products. He also has worked on the development of Vulcan's storage warehouse facilities at its Bellwood plant.

Lawrence M. Ferguson

★

Cowles Earnings Drop

Sales and earnings of Cowles Chemical Co., Cleveland, for the six-month period ending June 30, showed a slight decrease, it was announced recently. Net income totaled $101,918, equivalent to 55 cents per common stock share, compared with earnings of $119,920 or 69 cents per share for the same period in 1955. Net sales dropped to $3,010,429 from $3,145,520, a year earlier.

★

AAPCO To Meet Oct. 20

The Association of American Pesticide Control Officials will hold its annual meeting Oct. 20, at the Hotel Shoreham, Washington, D. C. The States Relations Committee of the association will meet the previous night.

★

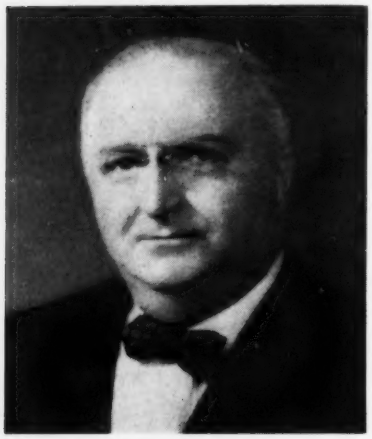
New Babbitt Chairman

B. T. Babbitt, Inc., New York, recently announced the election of Frank L. Weil as chairman of the board. Mr. Weil, a director of the company since 1923, succeeds the late Alan N. Mendleson. He is a member of the law firm of Weil, Gotshal & Manges and a director of the Union Underwear Co., Leon-Ferenbach, Inc., and Dorothy Draper, Inc.

Alan N. Mendleson, Jr., has just been elected as a director to fill the vacancy caused by the death of his father. Mr. Mendleson, a purchasing agent at the company's Albany, N. Y., plant, has been with the firm for seven years and represents the fourth generation of his family to take an active part in the management of Babbitt.

James J. Kerrigan Dies

James J. Kerrigan, 62, chairman of the executive committee of the board of directors of Merck &



James J. Kerrigan

Co., Rahway, N. J., manufacturing chemists, died Sept. 5, in Roosevelt Hospital, New York, after a long illness.

Starting as a messenger boy for Merck in 1907, Mr. Kerrican rose to the firm's presidency. He was elected to that position in 1950 to succeed George W. Merck, now chairman of the board. Five years later he relinquished his post as president. Mr. Kerrigan played an important role in the growth of his concern from a small firm of 300 employees in 1907 to one of 10,000 employees in 1955. During this period sales rose from $2,330,046 to $157,900,000.

Mr. Kerrigan initiated the Merck board of directors scientific awards in 1951. These honored company research scientists by grants for educational purposes in their names to colleges and universities of their choosing. In 1951 he received an honorary degree of Doctor of Laws from the National University of Ireland, the land of his birth. In the same year he was named a Knight of Malta, one of the highest Roman Catholic honors, and in 1955, a Knight of the Holy Sepulcher. Mr. Kerrigan received in 1952 one of the Horatio Alger awards given annually to persons who have risen to prominence from humble beginnings.

Surviving are his widow, the former Miss Doris Louise McGackin; three sons, Dr. Gerald A. Kerrigan, assistant professor of Pediatrics at Marquette University; James J., Jr. of Larchmont, N. Y., and Richard T. of Riverside, Conn.; two daughters, Mrs. J. Donald Miller of Washington and Miss Ann Margaret Kerrigan of Providence; a brother, Hugh A. of Bogota, N. J., and nine grandchildren.

★

Wyandotte Sales Record

Sales of Wyandotte Chemicals Corp., Wyandotte, Mich., reached a new high for a first-half year period in the six months ended June 30, it was announced recently by Robert B. Semple, president. Reported sales totaled $37,194,000 and earnings after taxes amounted to $2,157,700. Mr. Semple also added that any comparison with the first half of 1955 is not significant since the company's major productive units were tied up with an 82-day strike and the firm showed a loss of $1,444,811. The first half earnings, however, are the equivalent, after provision of $271,000 dividends on preferred stock, to $1.33 per share on the 1,421,563 common shares outstanding at June 30th.

★

Ungerer Moves in Chicago

Ungerer & Co., New York, has moved its Chicago office to 1415 Howard St., it was announced recently. The new location enables the firm to expand its warehouse and administrative facilities.

★

NPCA Roster

The National Pest Control Association, New York, recently announced the publication of a new booklet listing the complete roster of its members. The book is divided into several sections listing active, allied and honorary members of the association. It also lists current officers and members of the board of directors and past presidents and devotes a section to the company representatives active in the association.

Hercules Advances Edgar

The appointment of W. Coleman Edgar as sales manager of the naval stores department, agri-

W. Coleman Edgar

cultural chemicals division of Hercules Powder Co., Wilmington, Del., was announced recently. Mr. Edgar succeeds P. J. Reno who was recently named manager of the division.

A graduate of Princeton University, Mr. Edgar joined Hercules in 1943 as a chemist at the research center. He became a technical sales representative in 1946 and was assigned to the naval stores department in 1949. For the past two years he has associated with export sales and served as liaison with government research agencies. He will be replaced by Henry F. Pierce, formerly senior technical sales representative for naval stores at the firm's Los Angeles office. Mr. Pierce, a graduate of Penn State College and Rutgers University, joined Hercules in 1951 as a technical sales representative for the naval stores department in Wilmington. He was transferred to the west coast a year later.

★

Bromer Joins Lever

Lever Brothers Co., New York, has announced the appointment of John A. Bromer to the position of management placement counselor. Mr. Bromer formerly was the assistant general manager of the Chicago office of the Prudential Life Insurance Co.

Farrell WHC Sales Rep

James F. Farrell has joined the sales staff of Welch, Holme & Clark Co., New York, it was announced recently by L. S. Hirsch, president. Mr. Farrell will cover the New York metropolitan area.

★

C-P First Half Sales Up

Foreign and domestic sales of Colgate-Palmolive Co., New York, showed a substantial increase in the first six months of 1956. World-wide sales for the six month period ending June 30th were $256,390,000, as compared with $226,812,000 for the corresponding period in 1955. Domestic sales for the first six months totaled $152,-162,000, as compared with $137,-940,000 a year earlier. Sales of foreign subsidiaries totaled $104,-234,000 in the first half of 1956, as compared with $88,872,000 in the 1955 period.

The company's net income however, showed a slight decline dropping to $4,406,000 from $4,-501,000 for the preceding year. Common stock earnings also decreased according to the report. Earnings were $1.68 per common stock share in the first half of '56 compared with $1.74 per share a year ago. For the second quarter net income was down sharply to $1,785,000 from $3,403,000 in 1955.

The report also states that the domestic results for the first half of the year reflect substantial shipments and introductory costs applicable to new products. The results for the second quarter of 1955 reflect the recovery of shipments delayed because of a strike in March of that year.

Also the net income for the first six months of 1956 includes dividend income from foreign subsidiaries of $2,777,000 as compared with $2,047,000 last year. Actual earnings for the past six months of foreign subsidiaries were $4,155,-000, after deducting adjustments of $530,000 arising from foreign currency devaluations. This compares with earnings of $4,493,000 in the corresponding period in 1955. The undistributed portion of foreign net earnings for six months was equivalent to 70 cents per share in 1956 and 95 cents per share in 1955.

★

E. C. Sutter Dies

Edward C. Sutter, 56, vice-president of international operations of J. B. Williams Co., Glastonbury, Conn., died August 25 in Hartford, Conn. Mr. Sutter had served with Williams for 16 years.

★

New Waterless Cleaner

American Detergent Co., New York, announced recently the development of a new, waterless liquid hand cleaner, "Mighty Kleen." The cleaner is suited for the removal of stains, inks, carbon and other foreign matter from the skin. It contains lanolin and hexachlorophene.

Also available is a 32-ounce leakproof, sanitary, metal dispenser with a snap on or off wall mounting bracket. "Mighty Kleen" comes in 15, 30 and 55 gallon drums and 1 and 5 gallon spout cans. It can also be obtained in 12- and 32-ounce spout containers.

Velsicol Aids Pest Control

Velsicol Chemical Corp., Chicago, recently announced issuance of six new merchandising aids for pest control operator use. Three of the new pieces are colorful, self-mailing folders dealing with termites, lawn insects, and household insects. The remaining aids consist of three small size newspaper advertising mats featuring household, lawn and garden insects. These illustrations can be utilized in preparing newspaper and telephone directory advertising. Samples of the pest control aids can be obtained from the company, 330 East Grand Ave., Chicago 11, Ill.

★

R. W. Johnson Dies

Robert W. Johnson, 62, a representative of the Cowles Chemical Co., Cleveland, died recently of a heart ailment in Cleveland. A representative for the firm in the Cleveland-Pittsburgh area for the past 13 years, Mr. Johnson was associated with the laundry industry for 30 years.

Before joining the Cowles organization, Mr. Johnson had been associated with several commercial laundries in Chicago in various sales capacities. At the time of his death, he was an active member and past-president of the Cleveland Suds Club, an organization of laundry and dry cleaning allied tradesmen.

★

Bims Golf Tourney

BIMS of Boston will hold its final golf tournament of the season on Sept. 25, at Nashua Country Club, Nashua, N. H., it was announced recently by Hart Harris, Jr., S. B. Penick & Co., BIMS chairman.

Mr. Harris won the top prize of a portable television set at the organization's August tournament held at the Woodland Golf Club, Auburndale, Mass. Other winners at last month's outing were George E. Clark, Jr. and Leo Atamian, both of Boston Woven Hose and Rubber Co.; Charles Karkalits of Hoffman La Roche; and David Newell of Howe & French Co.

"All" Product Manager

Monsanto Chemical Co., St. Louis, recently announced the appointment of Edward P. Heath, as product manager of "All." Mr. Heath, who had been district manager for the consumer products division for the past year, will assume his new position at the firm's main office in St. Louis. He is succeeded by Paul H. McConnell, consumer district sales manager at San Francisco since 1954. Mr. McConnell, in turn, will be succeeded by Tom Jones, former assistant manager.

★

Acquired by Babbitt

The acquisition of Chemicals, Inc., San Francisco, was announced recently by B. T. Babbitt, Inc., New York. The west coast firm will be operated as a wholly owned subsidiary. Chemicals, Inc., makes a line of household chemical specialties under the trade name "Vano." Included are liquid starch, powdered bleach, household cleaner and liquid bleach.

Mortimer Fleishhacker, Jr., president of Chemicals, Inc., continues in that capacity. He also assumes new responsibilities as general manager and consultant in Babbitt's west coast operations. Other key personnel will also be retained.

Commenting on the newest addition to the Babbitt family, Samuel Mendleson, president, stated that he believed Chemicals, Inc., would strengthen the firm's west coast position in manufacturing and distribution facilities and further aid the expansion of Babbitt's west coast operations. He also feels that the products of Chemicals, Inc., can be expanded to the balance of the country and contribute to the company's growth in all areas.

★

ADACIOM Hears Pruitt

Roy S. Pruitt, chief of the St. Louis district, Department of Health, Education and Welfare, Food and Drug Administration, was the main speaker at the monthly meeting of the Associated Drug and Chemical Industries of Missouri, Inc., held Sept. 10 at the Hotel Chase. His topic was "Fifty Years of Progress in Pure Food and Drug Legislation."

★

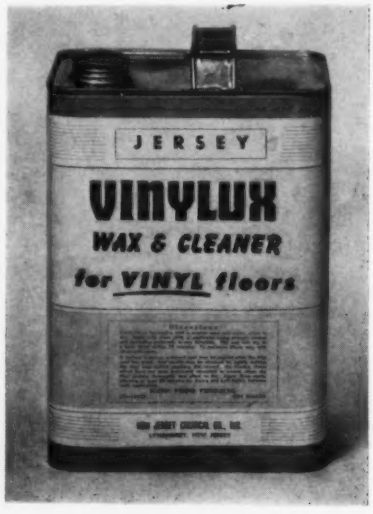
Two TV Shows Added

Boyle - Midway, Inc., New York, has added two NBC network shows to its TV schedule, it was announced recently by Strieder Schraffenberger, president. The programs "Queen for a Day," on which the firm will sponsor the first fifteen minute segment, 4:00 to 4:15 p.m., Mondays, and "It Could Be You," on which the company has the 12:45 to 1:00 p.m. portion, Mondays, will demonstrate several Boyle-Midway products including "Aerowax" floor wax, "Easy-Off" oven cleaner, "Wizard" deodorizer and "Sani-Flush" toilet bowl cleaner. The addition of these two shows gives Boyle-Midway five network television programs on which its products will be featured. The firm currently sponsors three network TV shows on CBS.

★

New Vinyl Wax

A new wax and cleaner for vinyl floors, trade-named "Vinylux," has been developed by New Jersey Chemical Company, Lyndhurst, N. J., it was announced recently. The product, a dry cleaner, is said to be anti-slip surface sealing, and applied with conventional tools. It can also be used on vinyl-asbestos, asphalt tile, linoleum, wood, sealed cork, terrazzo and magnesite floors.



Atlantic Names Higgins

George W. Higgins has been named chemical products sales engineer for Atlantic Refining Co., Philadelphia, it was announced recently by M. H. Reynolds, chemical products western sales manager. He will serve the Ohio, Indiana and Michigan areas. Mr. Higgins, formerly associated with Rubarite, Inc., Tulsa, is a graduate of Butler U. with a B.S. degree in chemistry.

★

Soap Election Contest

A soap sales promotion and contest, tied in with this fall's Presidential election, was announced recently by Armour & Co., Chicago, on behalf of its "Dial" soap. The contest is being run in conjunction with the national "get out the vote" campaign. Prize money totalling $56,000 will be awarded to winners who best express, in 25 words or less, the reasons for voting for a particular presidential candidate. First grand prize is $25,000 cash and second grand prize $10,000. Six weekly contests, running up to election night, Nov. 6, offer 206 prizes each week, with a $1,000 first prize. An entrant's candidate does not have to be elected to qualify for the prize.

Dealers can share in the contest money in two ways: An extra per case allowance will be in effect from Sept. 10 to Nov. 10. In addition, an $11,000 dealer display contest will be held with U. S. bonds awarded to 200 prize-winning displays in four different categories. Armour & Co. will back the contest through newspaper and television advertising.

★

Join Hooker Staff

Thornton R. Gebensleben and Frank P. Welkner, Jr. have joined the technical staff of Hooker Electrochemical Co., Niagara Falls, N. Y., it was announced recently by F. Leonard Bryant, works manager. Mr. Gebensleben is employed as a chemist in the works laboratory, while Mr. Welkner, a chemical engineer, is in the process study group.

spotlight on

uniformity, color stability
in oleic acid

Emersol® 211 Elaine

increased sales appeal of premium shampoo

If the color of your product changes with age or from batch to batch, then this customer experience may interest you . . . *Case History No. 22-42: A well-known manufacturer of premium shampoos replaced the ordinary single-distilled oleic acid in his formulation with Emersol 211 Low Titer Elaine because of its uniform color and greater resistance to color change during aging. The resultant uniform color of his shampoos produced greater consumer acceptance and subsequently greater sales.*

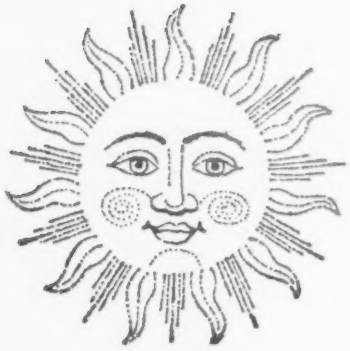
While uniformity of color was this manufacturer's primary concern, he found also that Emersol 211's outstanding oxidation stability, superior resistance to rancidity, uniform viscosity, and low unsaponifiable content, added materially to the overall quality and aging properties of his products. And since Emersol 211 costs no more than competitive grades, all these sales advantages were realized at no extra cost. Whatever products you are making, the replacement of an ordinary oleic acid by an Emersol Elaine will impart to them a high degree of color stability, oxidation stability, and resistance to rancidity. These factors, coupled with uniformity and all-around high quality, will make your products better, make them fresh and appealing, and keep them that way longer. So, if you are not already using an Emersol Elaine, why not order your next requirements from Emery? They cost no more than competitive grades so you have everything to gain, nothing to lose.

Emery

Fatty Acids & Derivatives
Plastolein Plasticizers
Twitchell Oils, Emulsifiers

Emery Industries, Inc., Carew Tower, Cincinnati 2, Ohio

New York; Philadelphia; Lowell, Mass.; Chicago; San Francisco; Cleveland; Ecclestone Chemical Co., Detroit
Warehouse stocks also in St. Louis, Buffalo, Baltimore and Los Angeles
Export: 2205 Carew Tower, Cincinnati 2, Ohio

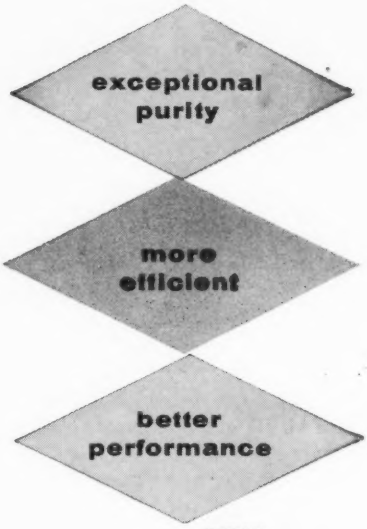


NEW HIGH PURITY

amides

guaranteed minimum amide content...90%

Improved foam stability . . . improved detergency as well as cost savings can be effected in lauryl sulfate and alkyl aryl sulfonate detergent formulations with the new Stepan high purity amides. These new products are all diethanolamides, offering exceptional purity and a particularly low amide ester content. They are guaranteed to have an amide content of 90% minimum, a free amine content of 7% maximum and a .5% maximum acid value.



STEPAN
◆ P-616
A high active lauramide. The amide content is 94% minimum lauric amide.

STEPAN
◆ P-621
A high active amide of diethanolamine, containing the lauric and myristic amides in the ratio of 75% and 25% respectively.

STEPAN
◆ P-650
A diethanolamide based on coconut fatty acids.

WRITE FOR COMPLETE INFORMATION AND SAMPLES

STEPAN CHEMICAL COMPANY
20 North Wacker Drive • Chicago 6, Illinois
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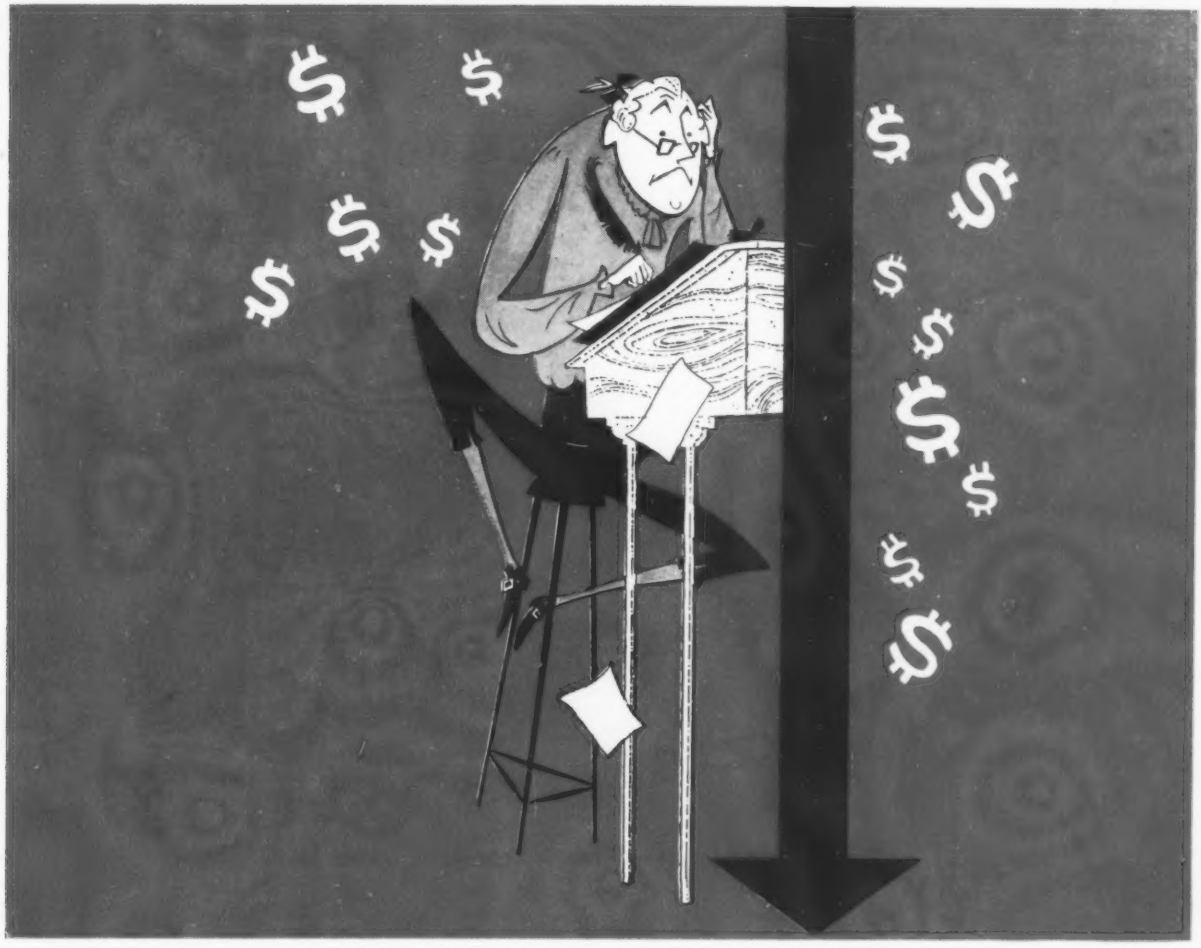

Figured your Caustic Soda costs lately?

An up-to-date analysis on the form of caustic soda you are buying may reveal a source of substantial savings for you.

Perhaps you should be buying liquor instead of dry. Maybe you should be getting 73% liquor instead of 50%.

A casual appraisal is not sufficient to uncover hidden savings. It takes delving into various cost factors such as purchase price of the material, transportation costs, unloading costs, labor cost for process handling, and investment cost of any added equipment to handle unloading and storage.

This is where Columbia-Southern's technical staff can be of service to you, and they are glad to do it, free and with no obligation whatsoever.

As a result of increasing costs in transportation, as well as changing conditions in your own plant, the best buy for you 5 years ago in caustic soda may not be your best buy today.

But why wonder? Why risk the chance of losing money every day from buying the wrong form of caustic? Contact Columbia-Southern's Pittsburgh office today. Arrangements will be made to give you an up-to-date analysis.

COLUMBIA-SOUTHERN CHEMICAL CORPORATION

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY

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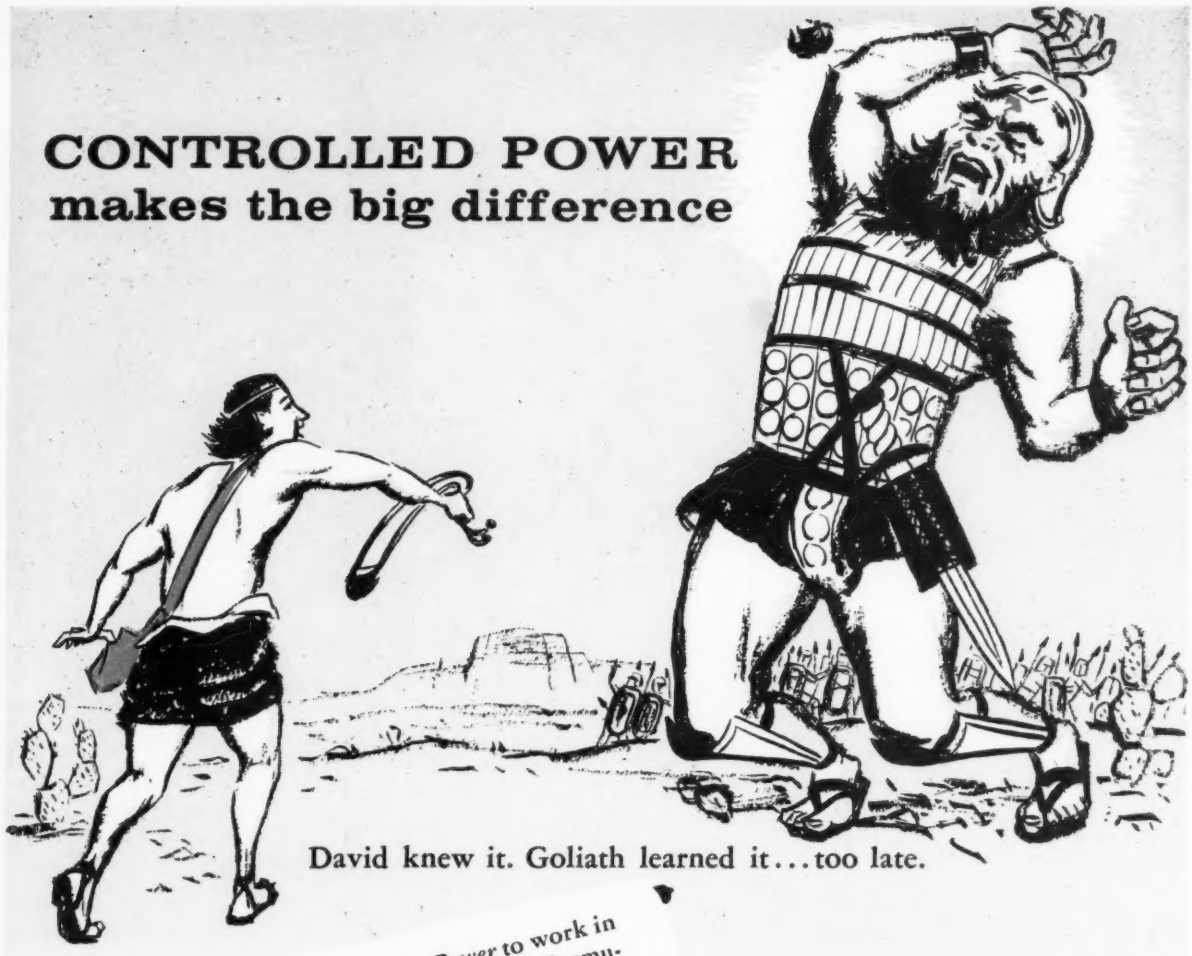
DISTRICT OFFICES: Cincinnati • Charlotte • Chicago • Cleveland • Boston • New York • St. Louis Minneapolis • New Orleans • Dallas • Houston • Pittsburgh • Philadelphia • San Francisco

IN CANADA: Standard Chemical Limited and its Commercial Chemicals Division

CONTROLLED POWER
makes the big difference



David knew it. Goliath learned it... too late.

You can put *Controlled Cleaning Power* to work in your industrial cleaners and detergents. Formulate them with . . .

Cowles DRYMET®

ANHYDROUS SODIUM METASILICATE

Your cleaners will have—

more soil-loosening power because DRYMET is so highly concentrated

more soil-dispersing power because DRYMET is so highly colloidal

more "staying" power because DRYMET provides a reserve of buffer capacity

Let Cowles DRYMET help you with your formulating problems. Get this DRYMET File Folder for Technical Data.

SEND THIS COUPON

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Send me a Drymet File Folder.

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Cowles CHEMICAL COMPANY

CLEVELAND 3, OHIO

Roundup of facts on surfactants based on

JEFFERSON

Ethylene Oxide

Hydrophobic material such as fatty acids, fatty alcohols, fatty acid amines and alkylated phenols may be reacted with Ethylene Oxide, forming polyoxyethylated derivatives which are employed as surface active agents.

Jefferson's "Literature Search of Surface Active Agents based on Ethylene Oxide" is a comprehensive roundup of the reactions which lead to surface active products, especially the non-ionic type. In many of the processes described, the non-ionic products are converted to ionic derivatives by further reaction. These are included together with the reactions of ethylene oxide with long chain alcohols, acids, amines, amides, etc., involved in the preparation of non-ionic derivatives.

A limited number of copies of this literature search is available. If you desire a copy, please write to us on your company stationery. **Jefferson Chemical Company, Inc., Box 303, Houston 1, Texas.**

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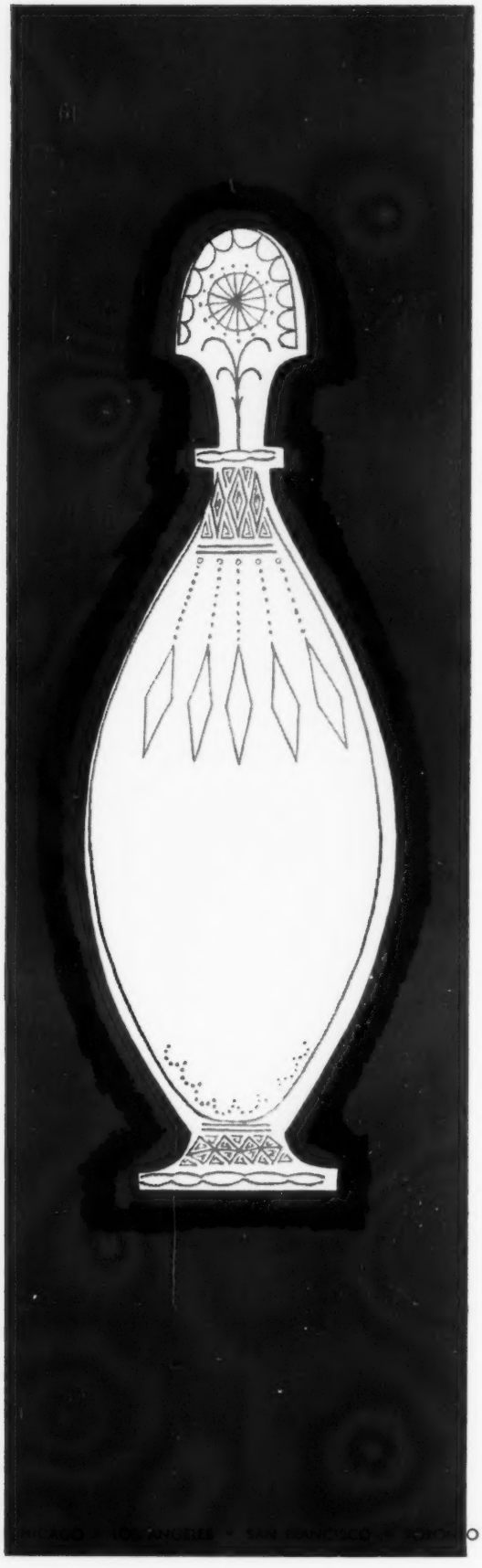

How to compose a classic: First, forget all common scents

Suppose you want to compose a classic cologne, or perhaps a toilet water. You want to make it memorable, because that makes it profitable.

Use Norda's nose to compose it. Norda's nose is trained to detect and select the truly distinguished odors you need. Norda has the master perfumer's skill in blending, uniting, combining, and creating the complete, perfect fragrance from the subtle, separate characteristics of differing odors.

Rely on good scents from Norda. Common scents will not satisfy you.

Get *free samples* of Norda's good scents by a request on your business letterhead.

Norda does what Nature does
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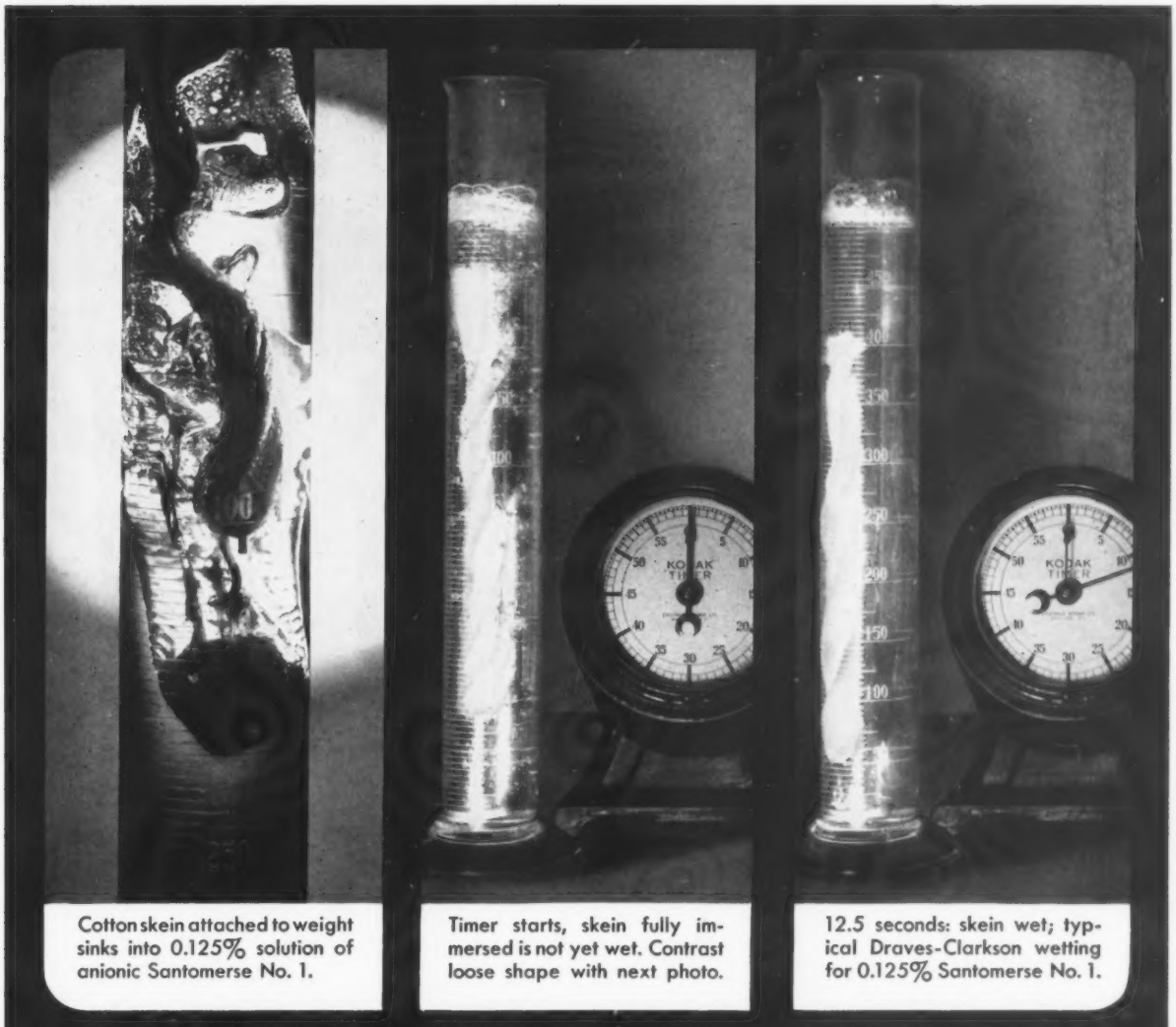

Cotton skein attached to weight sinks into 0.125% solution of anionic Santomerse No. 1.

Timer starts, skein fully immersed is not yet wet. Contrast loose shape with next photo.

12.5 seconds: skein wet; typical Draves-Clarkson wetting for 0.125% Santomerse No. 1.

Santomerse Proves How Fast It Wets

Monsanto's widely used, all-purpose anionic Santomerse emulsifies, penetrates, cleans—in hard or soft, hot or cold water—in acid or alkaline solutions.

It will pay you to test Santomerse No. 1.

Check its foam stability in water with fats and oils. See how it helps dish rinsing, eliminates toweling. Try it in a home-laundry or general-household cleanser where you want maximum detergency, high foaming and fast rinsing.

Put Santomerse No. 1 with phosphates and alkalis, and watch it clean rugs. Test its stability with calcium salts in a dairy cleaner. As part of a strong acid or alkali metal cleaner, it will fight grease and oil.

Santomerse No. 1 does an outstanding job in hard water. And note as you handle it, the light color, low dusting and flake strength.

Monsanto makes a full line of wetting agents and builder phosphates. One-source buying brings you impartial advice, fast service, simple ordering and money-saving mixed truckloads.

Call your local Monsanto representative. Or write: MONSANTO CHEMICAL COMPANY, Inorganic Chemicals Division, 710 North Twelfth Boulevard, St. Louis, 1, Missouri.

Santomerse: Reg. U. S. Pat. Off.

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Serving Industry . . . Which Serves Mankind

new . . . faster . . .
more sparkling
car washes

Nacconol®

Detergents for today's automobiles must make swift work of grease and road grime without dulling gay colors. Many of the best are based on Nacconol . . . pioneer detergent and still the leader.

You'll find Nacconol available in a combination of 14 physical forms or concentrations. National technicians will assist you in choosing the flake, bead, granular, powder or liquid form that best suits your needs. Whichever you use, you are assured of the right combination of quality and money-value for the particular job.

Samples are available without obligation and you can always depend on prompt shipments from nearby stocks. Contact the office nearest you.

Nacconol

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ALLIED CHEMICAL & DYE CORPORATION
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Los Angeles 58, Cal., 4814 Loma Vista Ave.	LOgan 8-2257	Greensboro, N.C., Jefferson Stand. Bldg.	GReensboro 3-2518
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Allied Chemical

CUSTOMER IN COLUMBUS needs a special proprietary chemical *immediately*. Manufacturer of the chemical has none on hand — nearest stock point is 350 miles away. Situation desperate, can Merchants do something?

MERCHANTS' MAN IN CINCINNATI calls the manufacturer, locates several drums of the chemical at the plant of a nearby soap company. They agree to lend three drums to meet the emergency. Merchants' truck makes the pickup.

AT MERCHANTS' WAREHOUSE, the drums are loaded into the car of "Dutch" Spatta, manager of Merchants' Cincinnati office. Regular delivery by truck will take too long.

A FAST 108 MILES LATER "Dutch" delivers the drums in time to keep production going. It was somebody else's product and somebody else's problem, but Merchants again lived up to its reputation for helping a customer out of a jam.

WHY MERCHANTS' CINCINNATI MANAGER DROVE 108 MILES TO DELIVER SOMEBODY ELSE'S PRODUCT —

At Merchants, service goes beyond the mere filling of orders for industrial chemicals. Each office of Merchants' nationwide chain makes a point of becoming familiar with its customers' problems. In the past 35 years Merchants has frequently "walked the extra mile" to help a production man out of a tight spot. Among the products offered are acids, alkalis, fungicides, surfactants, chlorinated solvents, emulsifiers, laundry compounds, soaps, dry ice and chemical specialties.

MERCHANTS CHEMICAL COMPANY, INC.

60 East 42nd Street, New York 17, N. Y.

SALES OFFICES AND WAREHOUSES: Chicago • Cincinnati • Denver • Louisville • Milwaukee • Columbus • Minneapolis • New York • Omaha

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JONES PRESSES TRAVEL FAR...

Soap manufacturers, the world over, acclaim the Jones Toggle Operated Soap Press as superior—in construction—operation—performance. This worldwide demand results from outstanding advantages:

Noiseless, vibration-free operation over a long period of years.

Elimination of frequent die cleaning.

Long dwell of dies on soap through toggle motion.

Firm, perfectly formed, highly finished cakes.

Clear-cut distinct lettering and designs.

Shown is a partial list of countries where progressive soap producers are now using Jones Presses. Are you? A new Jones Press can improve your product, increase your production, reduce your pressing costs. Write today for complete information.

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MEXICO
PALESTINE
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R. A. JONES & COMPANY, INC.

Cartoning Machines — Soap Presses

P. O. BOX 485

CINCINNATI, OHIO

. . . in brief

as the editor sees it . . .

DETERGENT SALES . . . . Sales of all soaps and detergents showed a sharp gain for the first half of 1956 over 1955. Tonnage was up 15.3 per cent and dollar value up 11.7 per cent, according to the figures of the Soap Association. As expected, synthetics showed the largest gain, sales of powders and liquids being up 25.4 per cent. This was more or less anticipated in the industry.

Two figures stand out as unusually significant in the Soap Association's figures. The first is the skyrocketing figure for liquid synthetic detergents. Their volume zoomed up 86.2 per cent over the 1955 period. The other significant figure is for soap sales. These showed a drop of only 1.5 per cent, the lowest loss in several years. To some, this indicates that soap sales have leveled out and have reached the bottom point of the downward trend. In fact, there are those who predict an upturn in soap sales in the months and years ahead.

By and large, the figures reflect what we choose to interpret as a live, virulent industry. In ten years, two-thirds of the industry's product has switched from soaps to synthetics. The industry appears to have taken this revolutionary change in stride.

* * * * *

INVENTORIES . . . . To use a fancy term, corporate liquidity today is at its lowest point since 1940. In other words, the ratio of inventories to working capital is now higher than at any time during the past sixteen years. This is according to a statement last month in the *Wall Street Journal*.

In itself, this report is not necessarily alarming, but it could sound a note of caution. While things are rolling along in fine style, inventories of either or both raw materials and finished goods are never a headache. On the whole, large inventories make for greater efficiency in manufacturing and in the prompt shipment of finished goods. They permit a manufacturer to take full advantage of sudden upsurges in demand for his products. In the field of chemical specialties, detergents, soaps, et al, the danger of spoilage in storage is minimized.

But inventories can get out of control in short order. Stocks of any material, raw or finished, can pile up quickly, often to the danger point. Under present slightly inflationary conditions, they could bear closer watching. Not that we feel business is due to hit the skids—just the reverse—but as a sensible precautionary measure. In other words, how's your "corporate liquidity?"

* * * * *

AEROSOL SHIPPING . . . . The proposed liberalization of shipping regulations covering pressurized products now under consideration by the Interstate Commerce Commerce Commission should go through without a hitch. Because of the execellent safety record in shipping these products, all those concerned with aerosols feel easing burdensome and unnecessarily restrictive limitations will meet with ICC approval.

Another factor arguing for these changes is the difficulty aerosol marketers and producers have been running into lately in interstate truck shipments. Unlike other non-pressurized flammable specialties, aerosols are required to carry the "red label" warning. Zealous inspectors at tunnels and bridges have been holding up such shipments, — needlessly we feel.

As H. A. Campbell, chief inspector of the Bureau of Explosives of the Association of American Railroads, said recently, there has been no record of personal injury or damage to property in shipping of aerosols. Coming from such a highly regarded authority, need further be said?

LIGNYL ACETATE

Another Shulton achievement in fine chemicals... Lignyl Acetate. Available at less than one-half the cost of linalyl acetate, Lignyl Acetate sets a new standard of economy and quality for linalyl acetate effects, Processed from domestic materials, constant in availability and price, Lignyl Acetate does a superior job in extending or replacing such odor complexes as bergamot, lavender, and petitgrain. And, of course, it is compatible with perfume materials and stable in soaps.

Technical bulletins, samples, and additional information, available on request.

SHULTON
FINE CHEMICALS

FINE CHEMICALS DIVISION
SHULTON, INC.
ROCKEFELLER CENTER
NEW YORK

INSECTICIDES . . . . For all practical purposes, the 1956 household insecticide season is over. And it has not been a particularly good year. A cold spring in many parts of the country apparently helped to reduce the population of household insects. Certain products sold well, according to reports by manufacturers. But what amount of carry over by retailers? On the whole, however, reports indicated that sales were below normal. We believe the year-end CSMA census will bear this out.

Although the sale of insecticides in 1955 was notably increased over 1954, especially in aerosols which showed a 30 per cent jump, this trend could be reversed this year. Wishful thinking to the contrary, people don't buy bug killers until they need them. In soaps, floor wax, foods, they anticipate their needs, buy ahead. But rarely in the case of insecticides, even including institutions and industry. People wait for the bugs to arrive. No bugs, no purchases of insecticides. For the fellow who could work out a system which would induce the housewife to buy her bug killers ahead, there would go the eternal gratitude of the insecticide industry.

* * * * *

PUBLICITY . . . . Two committees of the Chemical Specialties Manufacturers Association are toying with the idea,—and we use the word, "toying," advisedly,—of launching a $100,000 publicity campaign to cover a two year period. Half would be spent on aerosol publicity and half on moth control, the funds to be contributed by those with an interest in either or both fields. The campaigns would be directed by an expert working out of the CSMA office and under CSMA auspices.

To our way of thinking, both campaigns are naturals to catch on quickly and to do a lot of good saleswise for both aerosols and moth products. Both lend themselves ideally to consumer publicity. But the moth thing has been kicked around for two years or more and the aerosol publicity idea for a lesser period. Both seem to be milling around and at the moment getting nowhere fast. Some of those with much to gain from such a campaign appear to act coy.

Bluntly, we feel the first step is to get the money. Without it, the whole thing is out the window. Put the proposition right up to all interested parties. If they can't see it to the extent of loosening their purse strings, then let's quit toying with the idea and forget it.

* * * * *

CREDIT . . . . Reports from manufacturers of soaps, waxes and other materials sold to the industrial trade, both direct and through jobbers, indicate that collections have slowed up considerably over the past ninety days. A number of suppliers have told us that money has apparently become scarce and that many firms which previously discounted bills are now taking plenty of time in meeting their obligations. For the average manufacturer, accounts receivable are up, cash down.

For some time, we have felt that certain jobber organizations are overextended. Business, by and large, has been good and they have been expanding their operations probably with insufficient capital. Knowing the dire things that happen to manufacturers who become too tough in credit matters, many suppliers hesitate to put the heat on their customers. And the jobber continues to finance his business expansion with his suppliers' money.

This collection problem is as old as the hills. Get tough, lose the customer. Be easy, maybe lose your money. Nobody can tell any manufacturer what to do in any case. The decision is his.

* * * * *

CENSUS . . . . The recently issued Census Bureau report covering cleaning and polishing products serves a useful function in that it provides a barometer on sales trends. Although every effort is made to see that the report is accurate, in at least one product category the census figures seem low. From our own knowledge and study, plus first-hand information gathered by leading floor wax manufacturers, we believe sales totals for these products are considerably wide of the mark on the low side. On products for which statistics are available also through trade associations, census figures seem to be more in line with generally accepted market estimates. A word of caution: before making any major marketing decisions check carefully with industry sources any unsupported census data.

ATLAS chem-memos

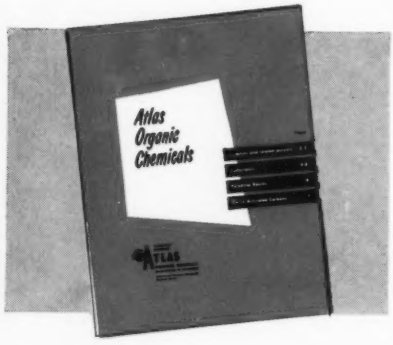
CHEMICALS DIVISION
ATLAS POWDER COMPANY, WILMINGTON 99, DELAWARE
Atlas Powder Company, Canada, Ltd., Brantford, Ontario, Canada

"Money-making tips for the chemical specialty manufacturer"

Two time-savers in formulating emulsions

Mix water with oils, fats, or waxes, and you're faced with the problem of choosing the right emulsifier from the hundreds available. It's a problem that's easily solved, though, when you have the Atlas emulsion-selection aids at your fingertips. Two of them are shown below.

These selection helps are based on the Atlas HLB (Hydrophile-Lipophile Balance) System. In this system, each emulsifier has a numerical value indicating its attraction for oil or water. Most types of emulsion applications are listed, with numerical values to indicate what value of emulsifier is best for each. Match up the values, and your work can often be cut immediately by as much as 80 to 90% for any specific emulsification job.



72-page booklet, "A Guide to Formulation of Industrial Emulsions with Atlas Surfactants." Contains data on the HLB System and on Atlas emulsifiers. Lists 64 guide formulas for typical emulsions, including polishes, petroleum products, cleaners, protective creams, textile processing aids, paints, lacquers, and miscellaneous industrial applications of wax and oil emulsions.

Organic Chemical Catalog. As a starter, ask us for our Organic Chemical Catalog, which gives you a summary of the HLB Principle, with a list of Atlas surfactants to choose from. And Atlas will be glad to give you further assistance on more specific problems of selection.

We'll be glad to send you either or both of these time-savers . . . just write or call Atlas

Housewives may take a shine to this aluminum brightener

Lots of selling possibilities in this new aluminum brightener formula. Although formulated as a liquid, this item could easily be made up as a paste, or could be compounded with a mild abrasive to serve as both a chemical brightener and mild polishing agent. Here's the formula:

Phosphoric acid (ortho 85%)	3%
Citric acid	4%
Atlas Renex® 20 or Atlas G-1690	2%
Methyl ethyl ketone	3%
Water	88%

While this formulation would be too expensive for industrial use, it should prove highly acceptable as a household item. The formula is easy to formulate and package, works with fast action and fine results. Caution: this formula could be hard on hands—rubber gloves should be worn.

See your Atlas salesman . . . or call any of these Atlas offices:

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LOS ANGELES
MIchigan 8896

Pack products in "squeeze bottles?"

If you make products that are packed in flexible polyethylene containers, you should be on guard against certain types of formulas that may cause these "squeeze bottle" containers to deform in storage. Atlas research disclosed that properly formulated oil-in-water emulsions do not affect the container . . . but that water-in-oil preparations often cause deformation.

You can have the published results of our tests. Just write to Atlas for a copy of the article, "Cosmetic Emulsions in Polyethylene Containers." Even if cosmetics aren't your line, you'll find much useful data on the selection of materials and ways to test product that you're packaging this way.

as the reader sees it...

Second in 43 Years

Editor:

I notice in the copy on the cover of the August issue of *SOAP & CHEMICAL SPECIALTIES* the phrase, "first new product of Bon Ami in 43 years", describing "Jet Spray", Bon Ami's new aerosol cleaner. I was under the impression that back around 1948 or '49 Bon Ami brought out a liquid glass cleaner called "Glass Gloss".

H.E.B.
Chicago

Right! Bon Ami did bring out "Glass Gloss" in the late Forties. Ed.

★

Silicates: Non-corrosive

Editor:

An error we think should be corrected appears on page 73 of the Production Section in the article "Cleaning Compound Formulation" in the August issue of *SOAP & CHEMICAL SPECIALTIES*. The error, which appears in the fourth paragraph under the heading "Home Washers," follows:

¶"Washing agents based on soap offer the following advantages over syndets for use in the home washer: superior soil carrying capacity, anticorrosive properties (especially important in the presence of silicates), and moderate sudsing."

¶That implies that silicates are corrosive, which is entirely contrary to the fact. In our research, we have found that certain of the synthetics are quite corrosive and, of course, the polyphosphates are corrosive. The combination results in rapid attack on many of the soft metals and for that reason, silicates which are well known for their protective action against metals, are used in appreciable amounts in these detergents. There are other good reasons for using silicates also, but the synthetic detergents, particularly those for automatic washers, must have silicates in order to keep the soft metal parts from deteriorating rapidly. This was not a critical factor in soap mixtures, as you indicated, and silicates are used there for their detergent building action.

The story on the protective action of silicates in synthetic detergents is completely outlined in *ASTM Bulletin* No. 205 for April, 1955, which was given as a paper during the 1954 annual meeting of ASTM Committee D-12 on Soaps and Other Detergents.

C. H. Jeglum,
Philadelphia Quartz Co.,
Philadelphia

Thanks to reader Jeglum for catching us in what appears to have been a faulty translation from the German in which the article originally appeared. Ed.

★

Captions Transposed

Editor:

Many thanks for your news note about our company on page 153 of the July issue of *SOAP & CHEMICAL SPECIALTIES*. Through an error, apparently in type setting, the names under the pictures of Mr. Olsen and Mr. Palmer were transposed.

A. C. Buhler,
executive vice-president,
A. S. Harrison Co.
South Norwalk, Conn.

We'll have to enter a plea of nolo contendere (no defense) on this one. Usually this happens when photographs are received without any identification on the back and they become separated from the release to which they are clipped. In this case, both pictures were received with the name stamped clearly on the back.

(*Turn to Page* 71)

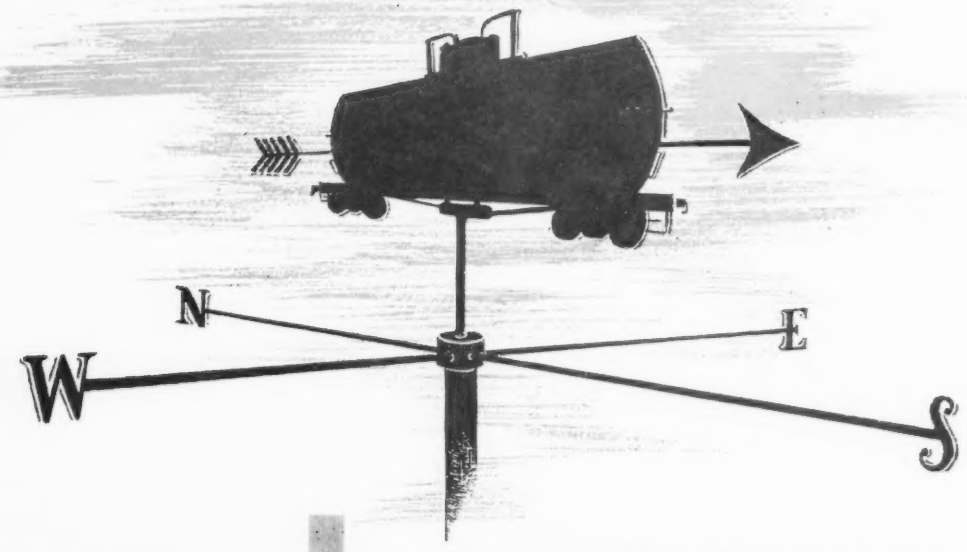
News item: John Conner lands another big fish! He's landed a lot of them in his day, but this one happens to be an eight foot marlin that he hooked down around Nags Head, N. C. Mr. Conner, the gentlemen on the left with the gleam in his eye, is attorney for CSMA and a member of the Washington law firm of Cummings, Sellers, Reeves & Conner.

C. E. Palmer

A. L. Olsen

"Situated to Serve"

the growing soap and detergent industry!



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Liquid 73%
Liquid 50%, Regular, Rayon and Low — Chloride Grade
Flake, Solid and Ground, 76% Na_2O

CAUSTIC POTASH

45 and 50% Liquid — Flake and Solid

Makers of soaps and detergents depend on Westvaco for their alkalis because Westvaco is situated to serve them best.

We're strategically located in South Charleston, W. Va., with one of the largest single electrolytic caustic-chlorine operations in the world. Barges, tank trucks and a fleet of railway tank cars are ready to reach you by inland waterway, highway or rail. Dependable deliveries enable you to economize on inventory and warehousing.

With 50 years experience, we're best situated to serve you with the uniform high quality you require and with unexcelled technical service, too.

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FMC CHEMICALS INCLUDE: BECCO *Peroxygen Chemicals* • WESTVACO *Alkalis, Chlorinated Chemicals and Carbon Bisulfide* • NIAGARA *Insecticides, Fungicides and Industrial Sulphur* • OHIO-APEX *Plasticizers and Chemicals* FAIRFIELD *Pesticide Compounds and Organic Chemicals* • WESTVACO *Phosphates, Barium and Magnesium Chemicals*

MEM-the firm built on NOVELTY SOAPS

Transform a favorite American dish into soap and it, too, becomes a best seller. Mem's hot dog novelty soap, introduced several years ago, is still the sales leader in a clever, attractive line.

THE growing interest in novelty soaps as Christmas gift items was never more evident than in the current buying season. Retail store buyers and merchandising men, however, are not confining their interest in novelty soaps to sales during the Christmas season, but are looking at them in terms of 'year round sellers. Novelty soaps have sold well in the past as holiday gift items and for gift giving throughout the year, but this year new highs in sales are expected.

Stephen H. Mayer, MEM president.

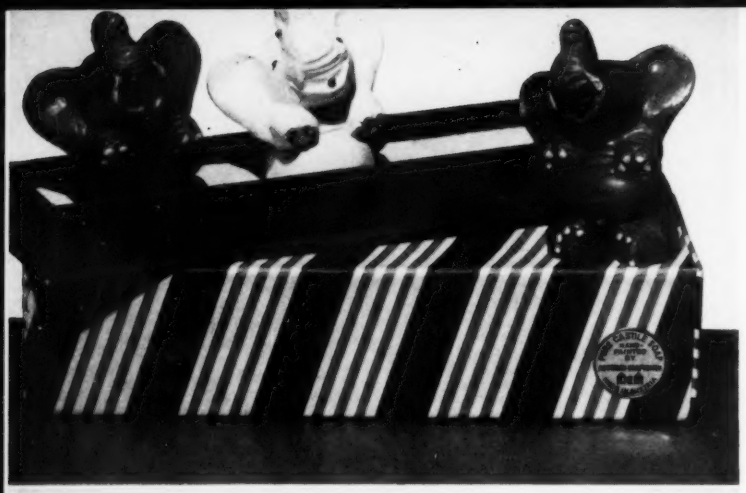
Adding impetus to sales are novelty items snapped up by soap collectors throughout the U. S. This group constitutes a ready and expanding market.

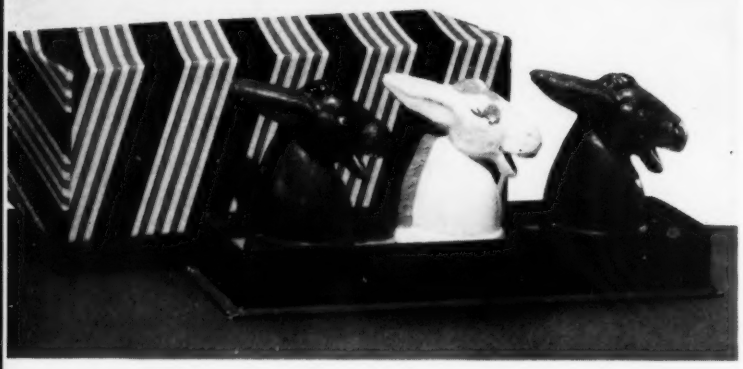
Probably not the only factor responsible for the growing volume of sales of novelty soaps, but certainly a very important one, is Mem Co., of 67 Irving Place, New York City, and Vienna. Old world traditions of artistry and craftsmanship combine with modern merchandising methods, initiative and enterprise, typical of the new world, to make Mem Co. a flourishing and most interesting member of the American soap trade.

Mem was founded in 1852 in the Wuppertal of Western Germany by soap maker E. M. Mayer, who named his business M.E.M. for his son, Max E. Mayer. The founder's great grandson, Stephen H. Mayer, American citizen and air force veteran, heads the Mem organization today.

Max E. Mayer moved from Germany to Vienna in 1883 and began to manufacture highly perfumed French milled soaps which he sold to court and society. Both of his sons, Paul and Theodore, joined him in the business which outgrew three successive homes and finally located in its own building. After Max E. Mayer's death in 1925 his two sons became joint heads of the firm.

Mem's contact with the American market dates back to 1920 when the first American department store buyers visited





Novelty soaps for an election year include the Republican elephant and the Democratic donkey.

Vienna after World War I. Between 1920 and 1938 the firm exported $5,000,000 worth of soap alone to the United States. · In 1925 the brothers Mayer visited the United States for the first time and found a large and receptive market for their soaps and toiletries. In subsequent years Mem sent salesmen to this country annually. In 1935, Peter C. Golffing, now vice-president and sales manager of Mem Co., was appointed export manager and visited the United States.

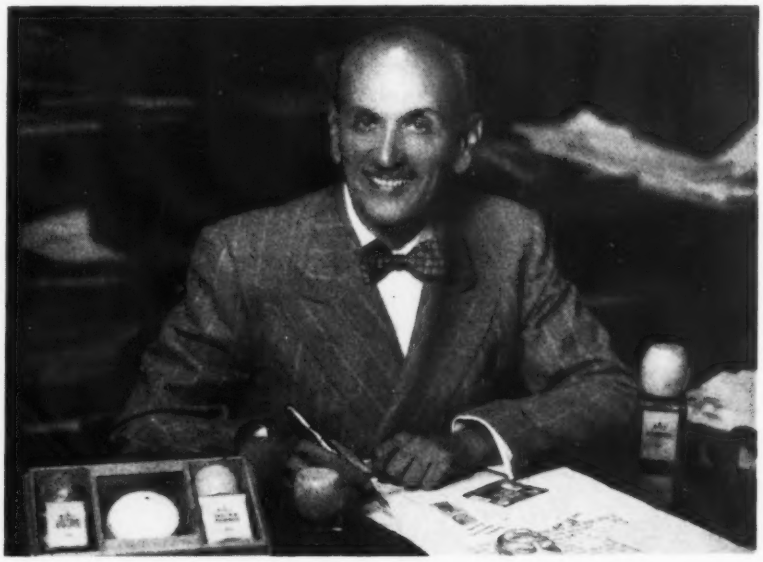
Hitler invaded Austria in 1938 and the Mayer family escaped to the United States, where they found new life and work and made their contribution like other refugees. Mem Co., Inc., was started in New York in 1940. A year later the firm located at 67 Irving Place in the building it acquired in 1945. During the war Stephen Mayer and Peter C. Golffing were on active duty with the United States armed forces, while Stephen's father, Paul M. E. Mayer, managed the business. Theodore died in 1944.

When the war was over Paul returned to Vienna to negotiate for the return of the family property. He succeeded in starting the proceedings but died from a heart attack on his way back to the United States in 1947. Stephen H. Mayer followed him as head of the firm and completed the struggle which restored the Austrian firm to its rightful owners. In addition, Mem acquired under his leadership its largest Austrian competitor, thus adding 50 percent to its production capacity in 1955. Other additions to its facilities have been made in recent years.

Today, the owners of the U. S. company, Stephen Mayer and his mother, Renee A. Mayer, own 50 percent of the Mem Company of Vienna, the other half is the property of Theodore Mayer's heirs. Approximately 65 percent of the dollar volume handled by the New York firm is made in Austria. Where the labor component constitutes more than 50 percent of the total cost the job is done in Europe. All mass production items and liquids are turned out in the U. S. The latter group includes Mem toiletries for men, most of the toilet soaps and those gift soaps and novelties which do not involve intricate dies, delicate hand painting, or hand wrapping operations.

All the novelty "food" soaps, such as the soap hamburger, hot dog, and the quick snack (swiss cheese, deviled egg and pickle) are made in Europe. The same applies to the whole family of enchanting soap animals, the French poodles, the three skunks, the fawns in the forest and bears, to name just a few. Started as a line for children, the soap toys and humorous items have found a sizable and sustained

Paul M. E. Mayer, father of the present head of the firm, managed MEM Co. during World War II, while his son and Peter C. Golffing, vice president and sales manager were in the armed services. Paul Mayer died in 1947 returning to the United States.



Other best sellers in the novelty soap line of MEM Co. include the "Three Bears" from the childrens' story of the same name, as well as "Hansel and Gretel." The "Little Stinkers" make a hit with adults.

market among soap collectors in every part of the United States. Best selling funny item is the most realistic hot dog; among animals the skunk has proved most popular. Mem keeps its line both seasonal and topical: during the world series it introduced "Double Play", a soap baseball and plastic glove soap dish: there is a soap football and plastic helmet for the football season; an elephant and donkey for election year; and a little lamb for Easter. Mem offers approximately 100 different soap novelties. Mem called this to the attention of collectors about a year ago by including a memo slip in all its packages. The response from collectors was overwhelming and convinced Mem executives that a little concerted effort on their part and that of retailers could create a considerable and steady market for novelties. Mr. Golffing has evolved a five-point program for retail stores: 1. establish your store as soap collectors headquarters; 2. maintain a prominent window and counter display; 3. establish a soap collectors corner highlighting the newest additions; 4. start a register of soap collectors and keep them informed of new arrivals; 5. use statement enclosures to attract soap collectors.

Apart from this fairly recent excursion into the hobby field, how does Mem conduct its annual million dollar soap business in the United States? Some 10,000 distributors and outlets receive catalogs seven times a year in addition to seasonal product folders. Mem employs 30 independent salesmen which cover the United States and territories, and uses very few jobbers. Department and drug stores are the main outlets, and one of the major mail order houses handles a large volume. Gift and novelty shops, and men's haberdashers are important. The firm's advertising in the press and on the radio is

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Collapsible Foams

Response of foamer performance to the foam stabilizer and changes in organic solvents concentrations peculiar to specific foamer

By Philip F. Kurz
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COLLAPSIBLE foams were investigated, since it was desired for convenience to dispense a liquid as a transient foam. Such collapsing foams can be generated from dilute aqueous solutions of active foaming agents containing additional solvents. This paper deals with foams having only transient stability and describes the factors which influence the volume and type of foams that can be generated from a given volume of aqueous foamer solution.

Apparatus

THE apparatus used in the experimental work has been described earlier (1). Briefly, compressed air was used to force the aqueous foamer solution upward through a vertical column packed with a layer of glass beads placed between two layers of glass wool. The foam passed through a gooseneck at the top of the column and was discharged downward from the generator outlet.

Foam Generation

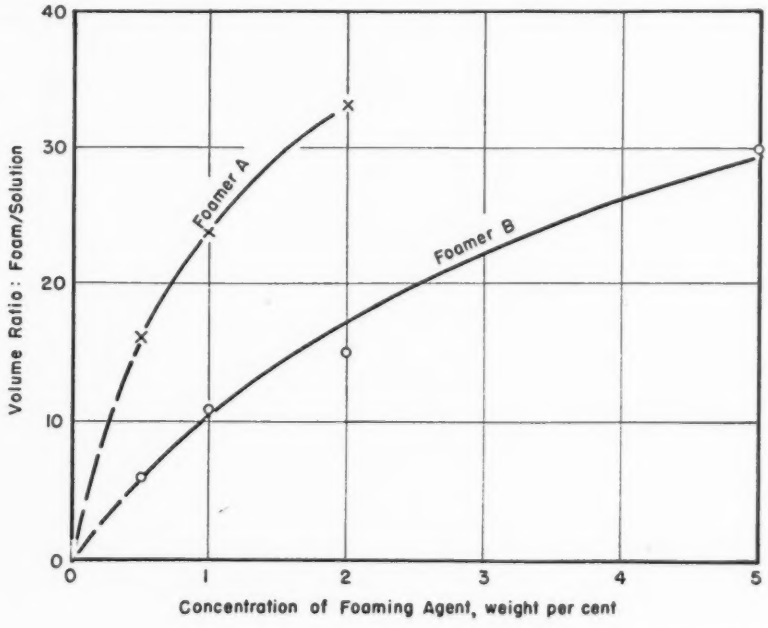
WHEN active commercial synthetic foaming agents* are used in *aqueous solution without* the addition of other solvents, the foam produced is usually quite stable. However, fairly substantial concentrations of foamer are required to produce nonwatery foams.

Figure 1 shows the effect of the concentration of two typical foaming agents on the volume of air-blown foam generated from 100 ml of aqueous solution.

More dilute water solutions of foamers were found to produce good air-blown foams in some instances, but the minimum concentration of foaming agent required usually exceeded 0.1 percent by weight. A typical example of the volume and condition of the foam generated from 100 ml of foamer solution in water is given in Figure 2.

It was found that foams with transient stability could be produced by the addition of water-miscible organic solvents to the water solutions of the foaming agents. The lower alcohols were found to be especially effective in promoting the generation of collapsible foams from dilute solutions of foaming agents. "Cellosolve" and "Carbitol" were found to be effective as "governors" in the control of the rate of collapse of the foam. Collapse of the foam was somewhat

Figure 1. Influence of foamer concentration on volume ratio: Air-blown from/water solution.



* Specific composition of these agents is not available.

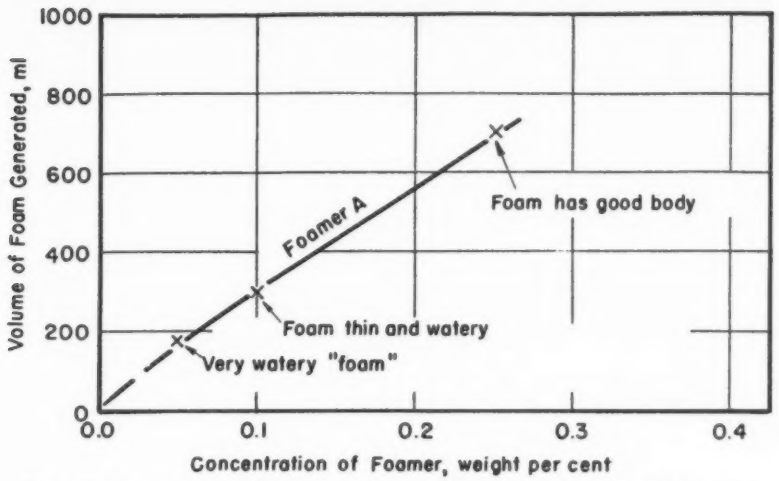


Figure 2. Amount and condition of air-blown foam generated from very dilute water solutions.

too rapid when only an alcohol was added to the water solution. In some instances, the presence of a low concentration (0.025 weight percent) or less of a foam stabilizer was desirable. However, this varied from one type of foamer to another and the action of the stabilizers appeared to be specific rather than general.

A generalized formulation which produced satisfactory collapsible foams from a variety of foamers is shown in Table 1.

Figure 3 shows the amount of collapsible foam produced in the air-blown generator from various charges of several foaming agents combined with water and other liquids as shown in the formulation presented above.

Table 1. Generalized Formulation for Producing Collapsible Foams

Component	Parts by volume
Water	83
Foamer solution (a)	5
Isopropanol (99 per cent)	10
Cellosolve	1
Carbitol	1
Total	100

(a) Solution contained 1 per cent by weight of foamer and 0.2 per cent by weight of a dispersant.

Figure 4 shows the relation between the size of the charge in the generator and the efficiency of foam generation expressed as the volume ratio of the foam produced to the liquid charged for typical foamer solutions prepared as described above.

Factors Affecting Foam Generation

IN addition to the concentration of the foamer in the solution, the concentration of the alcohol and, to a lesser extent, the concentrations of the other organic solvents and the presence of foam stabilizers may have a substantial effect on the amount and consistency of the collapsible foam produced by the air-blown generator.

Table 2 shows the influence of variations in the concentrations of the alcohol and other organic solvents on the volume of collapsible foam generated by air blowing. It is evident that the foam-producing properties of Foamer A are affected appreciably neither by variations in alcohol content from 10 to 20 percent nor by changes in "Cellosolve" content between one and 10 percent. The performance of Foamer F, on the contrary, is sensitive to the concentrations of both the alcohol and the "Cellosolve."

Figure 5 shows that the presence of a foam stabilizer in the foam-producing solution apparently does not affect the volume of foam generated. However, it was observed that the stabilizer reduced

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Figure 3. Amount of collapsible foam generated from a range of charges of various dilute foamer solutions.

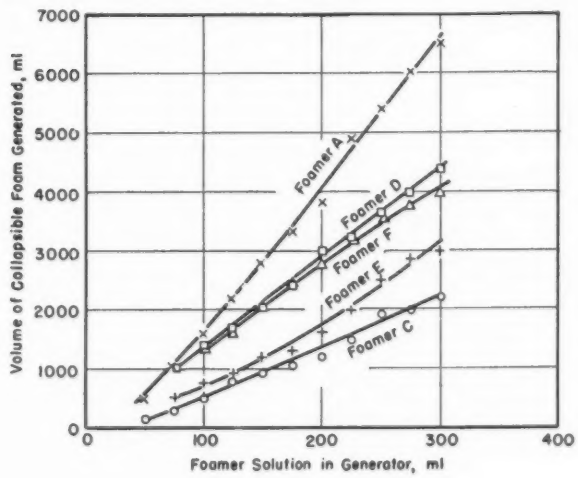
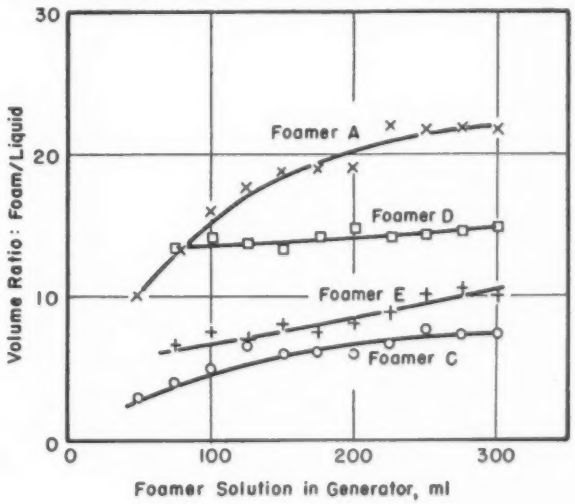


Figure 4. Foam produced per unit of liquid charged to generator.



Cleaning, Polishing Products Census

1954 Census figures confirm big growth of specialties since last census in '47

SALES of cleaning and polishing preparations were nearly three times as great in 1954 as in 1947, with over $1 billion of these products reported sold in 1954, as compared with the 1947 figure of $350,651,000. These data are contained in the advance report, 1954 Census of Manufactures, issued last month by the Bureau of the Census, U.S. Dept. of Commerce.

The report of the cleaning and polishing preparations industry covers such products as synthetic organic detergents, scouring cleansers containing synthetic organic detergents, floor waxes, furniture, automobile and shoe polishes, window, toilet bowl and wall cleaners, mechanics' hand soaps made with synthetic organic detergents, and paint and varnish removers.

Of the one billion dollar 1954 total, 44 percent was shipped by plants classified in the cleaning and polishing industry, while the remainder was shipped as secondary products classified in other industries. The report indicates that this relatively low ratio of 44 percent reflects the fact that a significant portion of cleaning and polishing preparations, particularly synthetic organic detergents, are produced in other industries.

According to the census, synthetic organic detergents accounted for more than half of the total value of sales in the industry while recording the biggest increase in value of sales for any single group of products. Packaged synthetic organic detergents, including products packaged in containers limited to 25 pounds and liquids when in containers of less than one gallon, showed an increase to $504,142,000 in 1954 from $93,242,000 in 1947. Synthetic organic detergents packaged in bulk quantities increased from $41,526,000 in 1947 to $92,769,000 in 1954.

Granulated, powdered, chip, flake, and sprayed detergent products in small packages showed the largest individual gain, increasing from a total value of sales of $91,349,000 in 1947 to $398,964,000 in 1954. Sales of detergents in bulk showed a slight increase. Sales of liquid detergents in packaged form also recorded a sharp increase to $35,670,000 in '54, as compared with $1,123,000 in '47. Bulk sales of liquid detergents gained from $4,063,000 in 1947 to $9,183,000 in 1954.

Specialty Detergents Up

SPECIALITY detergents as a group more than doubled in total value of sales, increasing from $43,697,000 in 1947 to $90,980,000 in 1954. Included in this category are window cleaning liquids, sales of which increased from $3,494,000 in 1947 to $6,924,000 in 1954; toilet bowl cleaners and drain solvents, up from $9,838,000 in '47 to $15,-

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Table 1. General Statistics for the Cleaning and Polishing Preparations Industry, in the United States: 1954 and 1947

(Standard Industrial Classification Code 2842)

Item	Unit of measure	1954	1947*	Percent change 1947-1954
Establishments	Number	1,150	1,038	+11
All employees:				
Number	Thousands	19.4	15.4	+26
Payroll	Million dollars	85.0	48.3	+76
Production workers:				
Number	Thousands	11.6	9.1	+27
Man-hours	Millions	22.4	18.6	+20
Wages	Million dollars	38.2	21.0	+82
Value added by manufacture[1]	do	287.0	136.6	+110
Cost of materials, fuel, electricity, and contract work[2]	do	272.9	128.4	+113
Value of shipments[3]	do	559.9	264.6	+112
Capital expenditures, new	do	12.7	9.7	+31

*Revised.

[1]For 1954, value of shipments less cost of materials, supplies, fuel, electric energy, and contract work. For 1947, estimated value of production was used in the calculation, in place of value of shipments. If the 1947 value added figure had been calculated on the basis of value of shipments (rather than estimated value of production, as was the case), the 1947 "value added by manufacture" for this industry would have been $136.2 million.

[2]Excludes cost of products bought and resold in the same condition.

[3]Includes, for all establishments classified in this industry, not only (a) their value of products "primary" to the industry, but also (b) their value of "secondary" products, which are primary to other industries, and (c) their "miscellaneous receipts" for repair work, sales of scrap, installation of own products, etc. Excludes sales of products bought and resold in the same condition.

Table 3. Quantity and Value of Cleaning and Polishing Preparations by All Producers in the United States: 1954 and 1947

(Includes quantity and value of these products reported both by establishments classified in the Cleaning and Polishing Preparations Industry, and by those establishments making these items as "secondary" products in other industries)

Product code	Product	Unit of quantity	Total shipments including interplant transfers			
			1954		1947	
			Quantity	Value ($1,000)	Quantity	Value ($1,000)
2842	Cleaning and polishing preparations, total		4,733	[1]1,000,200	xxx	350,651
28421	Synthetic organic detergents, packaged[2]		xxx	504,142	xxx	93,242
	Synthetic organic detergents (not in combination with soap but including combinations with inorganic alkaline detergents):					
2842111	Liquid	Thousand gallons	8,766	35,670	954	1,123
2842113	Bars	Thousand pounds	[3]3,392	[3]2,082		
2842115	Granulated, powdered, sprayed, chips, and flakes[4]	do	1,936,805	398,964		
2842117	Washing powders[5]	do	5,021	1,026	264,928	91,349
2842119	Paste and jelly	do	(6)	(6)		
	Synthetic organic detergents in combination with soap:					
2842131	Liquid	Thousand gallons	159	194	397	770
2842133	Bars	Thousand pounds	(6)	(6)		
2842135	Granulated, powdered, sprayed, chips and flakes[4]	do	193,399	32,558	(7)	(7)
2842137	Paste or jelly	do	(6)	(6)		
2842151	Scouring cleansers containing abrasives made with snythetic organic detergents	do	289,075	31,231	(NA)	(NA)
2842100	Synthetic organic detergents, packaged, not specified by kind		xxx	2,417	xxx	(8)
28422	Synthetic organic detergents, bulk[9]		xxx	32,769	xxx	41,526
	Synthetic organic detergents (not in combination with soap but including combinations with inorganic alkaline detergents):					
2842211	Liquid	Thousand gallons	5,704	9,183	4,825	4,063
2842213	Bars	Thousand pounds	5,828	907		
2842215	Granulated, powdered, sprayed, chips and flakes[4]	do	58,744	7,623	67,949	7,660
2842217	Washing powders[5]	do	23,304	3,047		
2842219	Paste and jelly	do	(10)	(10)		
	Synthetic organic detergents in combination with soap:					
2842231	Liquid	Thousand gallons	1,784	3,433	1,021	1,285
2842233	Bars	Thousand pounds	708	105		
2842235	Granulated, powdered, sprayed, chips and flakes[4]	do	63,132	10,523	[11]17,296	[11]1,139
2842237	Paste or jelly		[12]13,221	[12]2,012		
	Scouring cleansers, containing abrasives made with—					
2842251	Synthetic organic detergents	do	5,910	522	(NA)	(NA)
2842255	Others (including combination soap and S.O.D.)	do	652	118	(NA)	(NA)
2842271	Bulk surface active agents, other than sulfonated oils and fats, primarily for detergent purpose	do	xxx	51,613	xxx	27,379
2842200	Synthetic organic detergents, bulk, not specified by kind		xxx	3,683	xxx	(8)
28423	Specialty detergents		xxx	90,980	xxx	43,697
2842311	Glass window cleaning liquids	Thousand gallons	3,150	6,924	[13]655	3,493
2842321	Oil and dust absorbents, including sweeping compounds	Thousand pounds	62,882	2,886	75,351	1,742
2842331	Toilet bowl cleaner and drain pipe solvents	do	105,169	15,794	64,645	9,838
2842341	Wall paper, window shade and wall cleaner	do	86,967	16,155	106,050	16,398
	Paint and varnish removers:					
2842351	Methylchloride type		xxx	4,864	(14)	(14)
2842355	Other types		xxx	3,681	(15)	(15)

Table III (Cont'd)

Product code	Product	Unit of quantity	Total shipments including interplant transfers 1954 Quantity	1954 Value ($1,000)	1947 Quantity	1947 Value ($1,000)
	Brush cleaners:					
2842361	Powder	Thousand pounds	687	181	[16]2,195	[16]616
2842365	Liquid	Thousand gallons	485	847	[16]3,714	[16]4,652
	Mechanics hand soaps and pastes made with—					
2842371	Synthetic organic detergent	Thousand pounds	4,119	977	([17])	([17])
2842375	Other including combination	do	28,358	4,856	([17])	([17])
2842381	Dry cleaning spotting preparations (liquids)	Thousand gallons	4,264	8,174	6,452	6,958
2842385	Rug cleaners (including upholstery cleaners)	Thousand pounds	2,184	1,001	(NA)	(NA)
2842398	Other specialty detergents		xxx	15,225	xxx	xxx
2842300	Specialty detergents, not specified by kind		xxx	9,415	xxx	([7])
28424	Polishing preparations and related products		xxx	225,767	xxx	110,147
2842411	Automobile body polish and cleaners	Thousand pounds	47,688	22,152	22,949	7,526
2842415	Furniture polishes and cleaners	do	32,136	17,129	26,177	7,258
	Floor polish:					
2842421	Water emulsion	Thousand gallons	37,404	69,029	20,404	36,057
2842423	Liquid (other than water emulsion)	do	10,292	18,070	1,871	3,311
2842425	Paste and cake	Thousand pounds	22,180	6,642	18,255	6,324
2842429	Other	do	7,622	1,899	3,458	1,321
2842435	Metal polish (excluding stove polish)	do	25,005	6,422	17,156	3,829
	Shoe polishes and cleaners:					
	White:					
2842441	Liquid	Thousand gallons	1,378	7,733	1,553	3,549
2842443	Paste	Thousand pounds	751	622	2,364	1,478
	Other than white:					
2842445	Liquid	Thousand gallons	1,783	9,429	2,309	6,341
2842447	Paste	Thousand pounds	11,073	10,637	8,583	5,064
2842451	Chemically treated cleaning and polishing cloths and papers		xxx	4,404	xxx	([15])
	Leather dressings and finishes (excluding shoe polish):					
2842461	Leather blackings and stains	Thousand pounds	21,919	6,428	6,254	2,129
2842465	Other leather dressings and finishes	do	36,486	10,960	36,998	9,721
2842471	Dressing, excluding leather (auto top, etc.)	do	4,556	2,201	2,314	933
2842498	Other polishing preparations and related products, not elsewhere classified		xxx	18,637	xxx	15,306
2842400	Polishing preparations and related products, not specified by kind		xxx	13,373	xxx	([7])
28425	Alkaline detergents (mixture containing sodium and/or phosphatic compounds)		xxx	73,660	xxx	36,488
	Liquid preparations:					
2842511	Packaged[2]	Thousand gallons	936	619	(NA)	403
2842515	Bulk	do	8,478	5,377	(NA)	403
	Solid (including bars, flake, or powder):					
2842551	Packaged[2]	Thousand pounds	143,332	21,875	94,789	9,923
2842555	Bulk[8]	do	451,138	42,973	295,089	25,759
2842500	Alkaline detergents (mixture containing sodium and/or phosphatic compounds), not specified by kind		xxx	2,816	xxx	([7])
2842000	Cleaning and polishing preparations, not specified by kind		xxx	12,882	xxx	25,551

xxx Not applicable. NA Not available. [1]Of this total value, 44 percent was shipped by plants classified in the Cleaning and Polishing Preparation Industry; the remainder was shipped as "secondary" products classified in other industries. [2]Packaged detergents are limited to products packed in individual containers of less than 25 pounds; and for liquids, when in individual containers of less than one gallon. [3]Includes data for paste or jelly made in combination with soap and without soap, as well as for bars made in combination with soap. [4]Containing 10 percent or more synthetic organic surface active agents. [5]Containing less than 10 percent synthetic organic surface active agents. [6]Data included in totals for 2842113. [7]Data included in totals for bulk synthetic organic detergents, product codes 2842231-37. [8] Included in cleaning and polishing preparations not specified by kind. [9]Bulk detergents are limited to products packed in individual containers of 25 or more pounds; and for liquids, when in individual containers of 1 gallon or more. [10]Data included with figures for paste or jelly in combination with soap. [11]Includes data for packaged detergents. [12]Includes data for paste or jelly not in combination with soap. [13]1947 quantity published in pounds converted to gallons on the basis of 8 pounds equivalent to 1 gallon. [14]Data not reported separately in 1947 but included with figures for liquid brush cleaners. [15]Data not reported separately in 1947 but included with either liquid or powdered brush cleaners. [16]Includes paint and varnish cleaners. [17]Included in data for mechanics hand soap and paste, made with soap, product code 2841311. [18]Included in statistics for other polishing preparations and related products, n.e.c.

Problems in Scale Removal

Surface active materials appear to offer best prospects for future development of compounds for use in maintaining maximum performance in automotive cooling systems

By John J. Singer*
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BASICALLY there are only two methods by which scale can be removed from a cooling system. The first is by the use of chemicals which react with the scale to form new compounds which are soluble in the liquid contained in the system. The second method is to effect removal by purely physical means. Acidic materials and chelating agents function by chemical conversion. Grinding, brushing or the use of detergents and emulsifing agents comprise the physical method of removal. Both methods have advantages and disadvantages.

In a paper presented at a previous meeting, Jean Bordeaux of R. M. Hollingshead Corp., Camden, N. J., showed the primary component of auto radiator scale to be hydrated iron oxide. This material has no specific structure and the degree of hydration may be expected to vary widely depending on many factors, most of which are unknown. The rust presumably comes from an electrolytic type of corrosion.

Oil and grease which are invariably present, coat the rust particles with a protective film, making the job of removal more difficult.

The best chemical solvent for the hydrated iron oxide is a strong acid. Hydrochloric, phosphoric, and sulphuric have all been used successfully. These materials, of course, are dangerous to ship and to handle and unfortunately function as a solvent for cast iron and steel as well as for rust. For convenience in handling, dry acids such as oxalic, sulfamic and bisulfate are more widely used, with oxalic being the most prominent of the group. Oxalic acid is capable of the highest efficiency in dissolving the hydrated oxide. This is due to the low equivalent weight of the acid itself and to the reducing action of this compound. Oxalic acid also has the distinction of being both a strong acid and a complexing agent for iron. In an attempt to find a cleaning agent that did not require flushing, neutralization, and so forth, a great deal of work has been done with chelating agents, notably the polyphosphates and ethylenediaminetetraacetic acid salts. These materials, however, are not capable of dissolving iron oxide with any degree of effectiveness. In fact there are no chelating agents known which will dissolve iron oxide rapidly under the conditions which can be tolerated in an automobile cooling system.

Iron Chelating Agents

THERE are many iron chelating agents available which will complex iron and prevent its precipitation. Once iron has precipitated, however, these same compounds dissolve iron precipitate with great difficulty or not at all.

The reason for this inability to rapidly dissolve the iron oxide will become clear when the mechanics of precipitation and chelation are described.

In any system containing metal ions and a precipitating agent, an insoluble metal compound may be expected to form. However, certain metal ions and some of the precipitating agents remain in solution in unreacted form. The concentration of these two ions is related to each other and is dependant on the solubility product values of the precipitated materials.

In any system containing metal ions and a chelating agent for that metal, a soluble metal chelate may be expected to form. Again, however, some metal ions and some of the chelating agent remain in solution in unreacted form. The concentration of these two ions is related to each other and is dependent on the stability constant of the metal chelate compound.

Please note that the two paragraphs above are almost identical except for a few words and yet two completely different phenomena are described. The mechanics of precipitation and the mechanics of chelation are quite similiar.

If one has sufficient solu-

*Paper presented before the Automotive Division, 42nd midyear meeting, Chemical Specialties Manufacturers Association, Chicago, May 21, 1956.

bility product data one can calculate the concentration of the metal and anion that is in solution under various conditions. Similiarly if one knows the structure of the chelate and has stability constant data one can calculate the concentration of metal ions in solution. Such values are usually called pM values.

A comparison of the pM values calculated from solubility product data and from stability constant data will show whether a metal will precipitate or dissolve in the presence of a precipitating agent and a chelating agent. The values can also be used to show the point of reversibility.

In the case of calcium oxalate and EDTA we find that the concentration of Ca^{++} from solubility product data and the concentration of Ca^{++} from stability constant data plots as shown in the figure at various pH's.

For one, normal solutions, the curves intersect at approximately pH 5.5. Since the reaction which produces the smaller amount of calcium ions is favored, we find that at a pH above 5.5 chelation takes place, while at a pH lower than 5.5 precipitation occurs. The critical pH can be easily checked and substantiated by a simple laboratory test. Changing concentration of the calcium, the oxalate or the chelate will change the critical pH value.

In a radiator system we are dealing with iron compounds which have a property that many other materials do not possess, namely the ability to undergo molecular dehydration with ease.

$Fe(OH)_3 \cdot x\ H_2O$

$Fe_2O_3 \cdot x\ H_2O$

$Fe_2O_3 \cdot x\text{-}n\ H_2O$

When we are dealing with iron ions in solution the problem is simple, the chelating agent, if chosen correctly will keep the iron chosen correctly, will keep the iron is allowed to precipitate it begins to dehydrate internally immediately becoming more insoluble. In a very short time metal ion concentrations are such that precipitation is favored in spite of additions of large quantities of chelating agents. It appears that any departures from the standard acid cleaners will be in the direction of the physically acting methods as long as iron oxide is the major component of the scale.

There have been many advances in the field of surface chemistry which offer leads for further development of radiator cleaners.

Recently, a firm in Hobbs, N. M., United Chemical Corporation of New Mexico, was featured in many news releases which appeared in technical journals. This company developed and patented a series of water treating compounds which, when added to water in small amounts caused calcium sulfate scale to fracture and to be suspended colloidally in the water.

In systems where a temperature gradient exists and where precipitating agents are not added, the colloidal particles dissolve in the water. The over-all effect is removal of scale with concurrent increase in water hardness. By taking advantage of surface phenomena the conventional scaling process was reversed.

This same action also takes place with other types of scale, including iron oxide or hydroxide, but in such cases only a colloidal suspension results since the suspended material is very insoluble. Using this method, the cooling system of stationary gas engines have been cleaned rapidly and safely.

Such physically active materials have a distinct advantage in that they can be formulated with suitable corrosion inhibitors so as to allow the compound to remain in the cooling system permanently. Any corrosion products resulting from the inability of the inhibitor to be 100 percent effective would be colloidally suspended and insulating scale deposits would not form.

In summary, acid based cleaning agents are rapid in action and may be the only treatment for cleaning an obstructed or plugged system. They are corrosive and require care in use.

Chelating or sequestering agents are generally ineffective in dissolving the iron oxide scale found in automotive cooling systems but may be of some assistance due to their physical peptizing and suspending action.

Physically acting compounds appear to offer the best field for future development. Materials which function because of their surface active properties appear to offer the best prospects for the future development of compounds for use in maintaining maximum performance in automotive cooling

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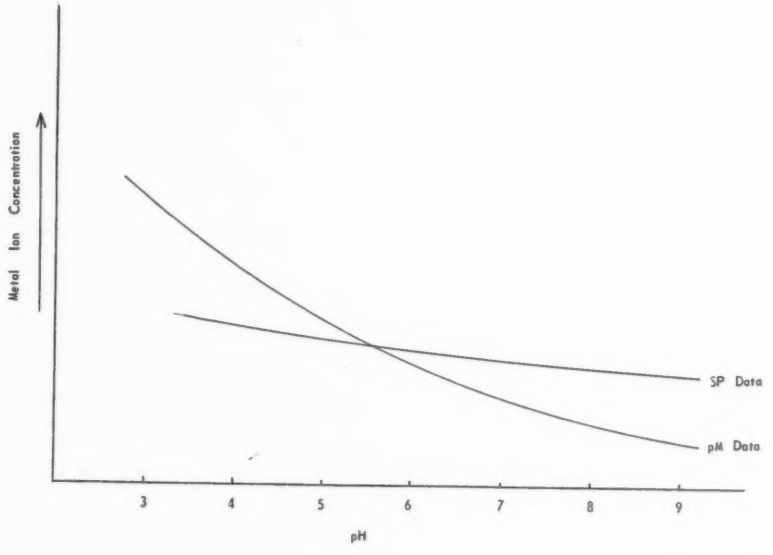

Japan's Soap Industry

Soap production of 279,177 metric tons in 1955 sets all-time record. Detergents lag far behind.

ONE of the few countries in which soap production is on the increase, Japan reported recently that last year's output had hit a record high. Soap production in that country in 1955 totaled 279,177 metric tons, which topped the previous record of 265,000 metric tons, set in 1939. Since 1953, Japanese soap production has increased each year by more than 40,000 tons. Production in 1955 was up 18 percent from the previous year.

Demand has kept pace with production. Shipments last year were 275,518 metric tons, or 15 percent over those of 1954. Prices of both toilet and laundry soaps have remained fairly stable, with the industry enjoying what is described as a "quantity boom."

Figures on the state of the Japanese soap industry are contained in a "Concise Report on Fat and Oil Products and Raw Materials in Japan for 1955", translated and made available in the U. S. by G. Hara of Nihon Yushi Co., Ltd., Chiyodaku, Tokyo, Japan.

Soap powders, again in 1955, showed the greatest rate of gain of all soap products in Japan, a trend which is said to be continuing. Production of soap powders amounted to 33,373 tons last year, for an increase of 47 percent over the 1954 output, and three times as great as the 1952 total. Growing sales of washing machines in Japan are said to account, in part at least, for the increasing popularity of soap powders among Japanese housewives. Output of electric washing machines climbed to 461,000 in 1955, as compared with 265,000 in the previous year. It is now estimated that there is one washing machine for each 21 families based on a total figure of 1,795,800 families in Japan in 1955.

Soap powder production in Japan represents 11.4 percent of the country's total output of soap and synthetic detergents. Average monthly production in 1955 was 2,781 tons, with August the largest month, when 3,296 tons were made, and January the lowest, with an output of 2,039 tons.

Toilet soap production in Japan also increased in 1955, when a total of 56,367 tons were reported for a nine percent increase over 1954. Shipments were 55,976 tons, up seven percent from the previous year. Although both production and shipments increased in 1955, toilet soap's share of the entire output of soaps and detergents declined in 1955 to 19.2 percent from 24.2 percent for 1954. Average monthly production of toilet soap was 4,697 tons in 1955, with the high point being reached in December, when the figure was 5,919. January production of 4,211 tons was the smallest month of the year.

Production of laundry soap in Japan in 1955 was 179,010 tons, 16 percent greater than in the previous year. Laundry soap's rate of increase is second only to that of soap powder, and its share of the total production of soaps and synthetic detergents is 60.7 percent, unchanged since 1953. Average monthly production of laundry soap in 1955 was 14,918 tons, with the largest output (19,554 tons) coming in August and the lowest in January (11,731 tons).

Increases were also reported for 1955 production in Japan of the smaller soap categories. Textile soap production amounted to 7,405 tons, up 37 percent from the previous year; industrial soap was 2,251 tons, an increase of 37 percent over 1954, and others including "agricultural" soap and metallic soap, 770 tons, a gain of 11 percent.

No comparative figures are given on the progress of synthetic detergents in Japan. However, by subtracting 1955 soap production of 279,177 from a figure for total output of soaps and synthetic detergents of 294,645, it would appear that Japan's production of synthetics in 1955 was around 15,468 metric tons.

Pricewise, soap prospects in Japan are improving too. The value of soap shipments last year was about four percent greater than in 1954. However, since prices remained fairly stable and costs of tallow and caustic soda rose, the net improvement in the total picture was not large.

Toilet soap shipments rose seven percent in 1955 over the previous year's total, while the value of these shipments increased 14 percent. Branded products continue to be favored by consumers, which helped to stabilize the market. The unit price of toilet soap jumped six percent in '55.

The value of laundry soap shipments increased 18 percent last year, as shipments rose 14 percent. The unit price per kilogram moved up to 85 yen, or a four percent increase, in 1955. In the laundry soap market in Japan, brands are not as much of a factor as in the

toilet soap field. This means that changes in raw material prices are reflected quickly in the prices of finished soaps. Prices in the first half of 1955 were kept steady by the shortage of tallow in Japan. Later in the year as the tallow market became somewhat easier, and demand was reduced, soap prices began to shade a little.

Eavenson & Sons Discontinues Soap Making

No arrangements have been made as yet for the transfer of the J. Eavenson & Sons soap business, it was announced early this month by the company. J. Eavenson & Sons, Camden, N. J., soap making division of Wilson & Co., Chicago, announced late in August that it was discontinuing its operation. Announcement of the closing of the plant was made by Victor Levinson, plant manager.

The plant, which manufactures soap products for both consumer and industrial uses, has operated in Camden since 1906. The company was acquired by Wilson in 1919 and since that time has operated as a wholly owned subsidiary. Since this is the only soap plant of Wilson, its closing means the meat packing firm is going out of the soap business.

Heavy operating losses in recent years was given as the reason for closing the plant. "Many of our buildings are more than 50 years old," Mr. Levinson pointed out, adding, "and plant expenses have been extremely high. Many employees have made an all-out effort to help us cut expenses, but while some headway was achieved, operating losses have continued." It was also indicated that newer, more modern plants in the industry made competition extremely difficult for Eavenson.

Production is understood to have been reduced, following notification of customers on Aug. 17, and all operations are to cease as soon as raw materials now on hand and in process are expended.

In addition to making and marketing soaps under its own trade names, including "Cream-Ade Soap," Jesco Pine" and "Bridal Bouquet," Eavenson sold a substantial volume of private label soap to department stores. A drop in the tonnage of this type of business also cut the firm's sales. Eavenson did not produce or market any synthetic detergents.

At its peak the Eavenson plant employed between 250 and 300 people. About half that number, or about 100 to 125 have been employed recently. Severance payments will be made to employees "with certain qualification requirements," the company announced.

A placement committee has been establishment, according to Mr. Levinson, to assist employees in finding new jobs. Companies interested in obtaining personnel may contact Mr. Levinson at Woodlawn 3-4216 or Lombard 3-4061.

L. Safron, soap maker, who has been with the firm for 18 years, has not announced his future plans as yet. Mr. Safron, in addition to his experience in soap making, is a recognized soap perfumer. He has written extensively on the subject in *Soap & Chemical Specialties*, and in other journals.

The Eavenson plant is the third soap plant in Camden to be sold in the last three years. Earlier Kranich Soap Co. of Brooklyn, bought the Camden plant of Iowa Soap Co., Burlington, Ia. This plant is not operating at present. Standard Soap Co. was sold early this year to Concord Chemical Co., Moorestown, N. J., which subsequently moved its headquarters to Camden.

Although the Eavenson equipment will probably be sold at auction, it is understood the firm is trying to transfer its private label business to another supplier capable of rendering the service provided by Eavenson to its customers. Eavenson's private label customers include Macy's and Bloomingdale's, New York department stores, and S. S. Pierce Co., Boston.

★

Stiefel Changes Name

Stiefel Medicinal Soap Co., Oak Hill, N. Y., announced last month a change in the company name to Stiefel Laboratories, Inc., A. C. Stiefel, president, stated that the name change was occasioned by the fact that the firm now has several non-medicinal soaps and hand cleaners under development and does not wish to be identified solely as a medicinal soap company.

Stiefel, which was founded in 1847, and imported its entire stock of products from Germany until 1939, manufactures about 20 brands of medicinal soaps plus various hand creams. Its medicated soaps are sold for use by persons allergic to usual type soaps or whose skin requires a special cleansing agent recommended by a physician. Two of Stiefel's most widely-used soap products are "Acne Aid" and "Oilatum." The former is a detergent soap used for cleaning hands in preparation for treatment of acne cases. "Oilatum," a medicinal soap with a high vegetable oil content, is utilized by persons with super-sensitive skin and those allergic to the oils of commercially marketed soaps.

In addition to Mr. Stiefel, the officers of the firm include D. B. Kirkbride and W. K. Stiefel, vice-presidents.

★

Atwood "Chiffon" Manager

Armour & Co., Chicago, recently announced the appointment of Allen A. Atwood to the household soap department as product manager for "Chiffon Liquid." A graduate of Cornell University with a B.A. degree in economics and a masters degree in business administration, Mr. Atwood has had training in the sale and merchandising of soap products. He had been previously employed by Benton & Bowles, Inc., New York, advertising agency, as an account executive.

Development and Testing of

ENGINE DEGREASERS

By Bernard Berkeley and Daniel Schoenholz*

Foster D. Snell, Inc.
New York

ENGINE surface degreasers are employed for a number of reasons, some real and others inponderable. While it is beyond the scope of this paper to decide which factor contributes most to sales, we would be remiss in our duties if we failed to mention some of the motivating forces.

1. Elimination of a potential fire hazard presented by accumulation of oil and grease.

2. Maintenance of normal engine temperature by removal of the insulating blanket of soil.

3. Facilitation of service and repair operations by working with clean surfaces.

4. Aesthetic taste since there are some of us who value beauty and neatness in all things including engine appearance.

5. Promote easy detection of leaking parts.

6. Upgrade engine appearance for greater sales appeal.

Engine soil is a heterogeneous mixture of oil and grease in various stages of oxidation combined with miscellaneous airborne and traffic dirt. Because of the high temperatures encountered on and around the engine it is not uncommon for some of the soil to be varnish-like and in spots to be partially or wholly carbonized.

Chemically speaking, engine soil normally consists of a predominant quantity of paraffinic and naphthenic hydrocarbons, lesser amounts of partially oxidized hydrocarbons and organic acids, some alkaline earth metal and/or alkali soaps, metallo-organic sulfonates (depending on the lubricant), carbonized particles, siliceous matter, water soluble salts and dust motes.

Degreaser Selection

THE type of degreaser to be used depends primarily on the amount of soil to be removed, its condition on the engine, and the desired method of application. There are a diverse number of classifications for degreasers in common usage which present a confusing picture to the consumer. Some of the popular grades are typified by composition, e. g., phenolic, non-phenolic, chlorinated, alkaline. Others are classed by performance, viz., light-, moderate- and heavy-duty cleaners. A few are rated as either emulsifying or non-emulsifying types.

The removal of thin films of soil which have not undergone oxidation or degradation is easily accomplished by blends or cuts of aliphatic petroleum hydrocarbons having flash points above 100° F. such as mineral spirits and kerosene. These solvents are the real work horses in the degreaser field, since they are relatively free from health and fire hazards, are low in cost, and do not cause deterioration of paint and accessory equipment.

Moderate amounts of partially oxidized engine soil require the use of degreaser compounds having greater solvency than straight aliphatic petroleum hydrocarbons. Here, formulators have a relatively wide choice of materials. Generally speaking, these degreasers are blends selected for solvency, flash point, evaporation and stability characteristics. Examples of such materials are: aromatic petroleum hydrocarbon fractions; pure aromatic solvents such as xylene and toluene; chlorinated solvents including orthodichlorobenzene, perchloroethylene, methylene chloride, dichloropentanes, methyl chloroform, etc. Typical compositions utilizing blends of solvents are described below:

A

Petroleum naphtha	%
(boiling range 290-350°F.)	75.00
Perchloroethylene	24.98
Inhibitor	0.02

B

Medium solvency aromatic naphtha	
(boiling range 200-300°F.)	96.00
Orthodichlorobenzene	4.00

The problem of degreasing either heavy surface films of oil and grease or varnish-like deposits calls for specially compounded cleaners. Unlike the other types of degreasers, these cleaners are diluted prior to use with petroleum naphtha or kerosene and their application is followed by a high pressure water spray. This flush-off technique is prompted by the need to avoid direct skin contact with the compound and in consideration of the most economical means of rinsing away large amounts of grease and oil. Ideally, the degreaser is applied by brush or spray, allowed to remain in contact with the soiled surface for 15-30 minutes, following which the dirt and cleaner are flushed off the surface with water. Aside from leaving the engine soil free, the cleaner should have no deleterious effect on the component

* Paper presented during 42nd midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 21, 1956.

parts of the engine and surrounding accessory equipment.

Solvent Selection

THE pre-selection of a solvent for use in degreaser compounds largely can be guided by published solvency data for many materials. There are a number of different types of tests which are used for hydrocarbons to express solvency. The two most common methods are the Aniline Point Determination and the Kauri-Butanol Procedure. The former sometimes referred to as the critical solvent temperature refers to the maximum temperature at which equal volumes of the test solvent and aniline can exist as two liquid phases. At temperatures above the aniline point, the two solvents mutually dissolve each other. Solvents which are miscible at very low temperatures are tested with a mixture of aniline and petroleum naphtha to give a mixed aniline point. As a rule, lower aniline points indicate greater solvency. The kauri-butanol value refers to the amount of solvent required to induce a cloud in a standard solution of kauri gum and butanol. High k-b values indicate greater solvency characteristics.

Some other values which are also used are the dimethyl sulfate value which measures the percentage of aromatic constituents and unsaturated aliphatic hydrocarbons of the olefine series. There are also various dilution ratio tests which give some insight regarding miscibility of solvent combinations.

A word of caution is apropos regarding the use of solvency data obtained by present methods. While the available data are valuable, the experimenter should be aware that the test procedures are often based on standards that have no direct bearing to soil conditions actually encountered on engines. Furthermore, the methods have definite limitations in types of solvents that can be evaluated. To illustrate the need for intelligent use of solvency data, we point to the aniline point and kauri-butanol value of heavy pine oil. Accepting the prima facie evidence would lead us to conclude that pine oil is superior to the other solvents. While it is true that pine oil is an excellent solvent for aniline and kauri gum actual field and laboratory trials on soiled engines have shown that many solvents with higher aniline points and lower k-b values than pine oil exhibit more effective degreasing powers.

Table I. Typical solvency data on various hydrocarbons.

	Solvency Data	
	Aniline Point °F	Kauri-Butanol Value
Turpentine	77	50
Dipentene	5	65
Heavy pine oil	—76	∞
Aliphatic petroleum naphthas	80-140	25-50
Aromatic petroleum naphthas	20-50	50-80
Toluene	50*	100
Xylol	51*	93
Kerosene	155	30
Light Mineral Oil	177	24

* Mixed aniline point.

Self-Emulsifying Systems

THERE are published methods and data based on the use of a hydrophile-lypophile balance which can serve as a rough guide for pre-selection of suitable emulsifier systems. In addition to these, emulsification charts are available for some surfactants and there are numerous suggestions in the technical literature for starting points in the development of allied compounds. There is also a vast amount of compiled theoretical information dealing with the theory of emulsification which can augment our understanding of the required properties we seek in surface-active agents.

However, there is no current substitute for experience and ingenuity of the experimenter when it comes to developing emulsifier systems that will be effective over a wide dilution range and in the presence of an indeterminate amount of heterogeneous soil.

Trial and error experiments or even the initial use of emulsion systems recommended in the technical literature will undoubtedly enable the formulator to compound a reasonably satisfactory product. However, the development of a superior formulation oft times requires refinements that are the true measure of an emulsion chemist's abilities. Among the bag of tricks commonly employed to improve emulsifying properties of degreasers are pH adjustment, use of combinations of oil- and water-soluble emulsifiers rather than single surfactants, incorporation of co-solvents and mutual solubilizers such as alcohols and glycolethers and use of low viscosity surfactants.

Typical degreaser compounds have for some time contained mixtures of water-soluble soaps, liquid hydrocarbon grease solvents and alkali metal phenolate. A. F. Curran (1) described the approximate compositions of his products as follows:

	Parts by Weight
Tall oil soap	75.44
Solvent	17.5-33
Alkali metal phenolate	12.5-23

The tall oil base consisted of a mixture of rosin acids, fatty acids and unsaponifiable matter. Although potash was preferred for preparation of a fluid soap, other alkalies such as caustic soda, ammonia and various amines were suggested as suitable replacements.

Kerosene, pine oil and chlorinated solvents were named as being good hydrocarbon grease solvents. The alkali metal phenolate mentioned by Curran was formed

(1) U. S. Patent 2,107,287 and 2,107,288.

by reaction of alkali with cresylic acid. It was claimed that other phenols represented by carbolic acid, xylenols, alpha and beta naphthol, etc. could be used in place of cresylic acid. The alkali cresylates were believed by Curran to serve primarily as a mutual solubilizer for the soap-solvent phase which ordinarily would not be compatible on aging. It has since been shown that cresylic acid and alkali cresylates in combination with naphthas are powerful solvents for the type of soil encountered on engines.

Curran also disclosed alternate degreaser compounds capable of being greatly diluted while still maintaining water-rinsable features. These he described as being essentially solutions of liquid soap and free alkali in organic solvents. His substantially anhydrous compositions are mixtures of tall oil soap, grease solvents and alcohol with or without alkali cresylates.

Although it was claimed that the alcohol acted primarily as a carrier for the alkali, we now know that it promotes clarity of the mixture and assists emulsification of the diluted product. Examples of suitable caustic solvents are ethyl, butyl and other alcohols, diethylene glycol, monobutyl ether and diacetone.

Compositions based on those described by Curran except for water content are currently in use as evidenced by the following typical compound:

	Parts by Weight
Crude pine fatty acid soap	39
Alkali cresylate	12
Kerosene	19
Amyl alcohol	12
Water	18

Evaluating Performance

IN ADDITION to conducting tests for product stability, dilution characteristics and emulsion properties, every formulator is faced with the problem of evaluating the cleaning action of his product. The first and most pressing hurdle to be overcome is selection of an adequate soil. There are a number of typical synthetic mixtures compiled in the literature (2) that deserve consideration. Some of these and their uses are described as follows:

Soil Mixture A

Asphalt	43 gms.
Kerosene	100 ml.
Grade 1120 engine oil	15 ml.
Xylene	250 ml.

The soil mixture is baked on Alclad 24S-T aluminum alloy panels at 380°F. for three hours. The soiled panels are treated with cleaning compound, allowed to soak two minutes then scrubbed with a brush for 30 seconds. The cleaner and soil are then rinsed off the panels with distilled water.

Soil Mixture B

Lubricating Oil	50 gms.
Talc	50 gms.

A paste of lubricating oil, SAE 70 viscosity, and talcum powder is spread over the surface of corrugated aluminum and baked at 290-300°F. for three hours. The soiled panels are soaked in diluted cleaner for ten minutes then flushed with water.

Soil Mixture C

	Parts by Weight
Xylene	20
Asphalt	5
Spar varnish	10
Alkali refined linseed oil	10
Lubricating oil	5
Magnesium silicate	10
Lamp black	10

Soil Mixture C is specifically recommended for testing carbon removers rather than degreasers. However, it represents a soil condition that sometimes occurs on engine parts that are subject to degreasing operations.

The soil is brushed on steel panels which are then baked at 143-149°C. for three hours.

Soil Mixture D

	Parts by Weight
General purpose grease	6.5
Lubricating oil	58.5
Leaded gasoline	35.0

Corrugated aluminum panels are dip-coated with the soil mixture, allowed to drain, then baked at 212°F. for one hour. The prepared panels are dipped into test cleaner then observed for residual oil.

Soil Mixture E

Oxidized asphalt (M. P. Saturant 130-140)a	172 grams.
Kerosene	100 ml.
Xylene	350 ml.
Motor oil, SAE 40 (Lubrite)b	60 ml.

a and b Supplied by Socony-Vacuum Co., Inc.

The above mixture is prepared by heating together all the ingredients under reflux until a uniform solution is obtained.

Our laboratory has successfully used Soil Mixture E in conjunction with specially prepared specimens of corrugated aluminum for testing numerous degreasing compounds.

Metal Panels

TEST specimens are prepared from 20 gauge corrugated aluminum* sheets having eight hollows to the inch. The depth of the hollows should be about 1/64 inch. We have found it convenient to start with a panel 4" x 2" then cut out a tongue ¾" long and ½" wide through which a 3/16" hole is drilled. In addition, a triangular bottom section is formed having a 90° angle. The purpose of the angular tip is to eliminate irregularities in cleaning results due to a non-uniform soil deposit at the bottom of the panel.

The tongue at the top of the specimen permits the panel to be clamped rigidly in position during the draining period.

Preparation of Metal Specimens

IF THE soiled panels are to be used visually to estimate cleaning efficiency, the metals need no previous treatment except a dip in hot chlorinated solvent to remove residual oil. However, for quantitative evaluations it is necessary thoroughly to clean the surface

(2) Berkeley, B., Shafiroff, L., "Non-Toxic Solvent for Cleaning Aircraft Engines at Extremely Low Temperatures" WADC Technical Report 53-147, 15 May 1953.

*Flat Sheet, Square Embossed Aluminum—Reynolds Aluminum Co.

prior to soiling in order to insure uniform soil pick-up. We recommend the following procedure:

1. Soak in boiling trichloroethylene.

2. Scrub with a stiff bristled hand brush dipped into a hot solution of one percent alkaline aluminum cleaner.

3. Rinse with hot water followed by two rinses with a 50/50 mixture of acetone and benzol.

4. Air-dry.

An alkaline aluminum cleaner that is satisfactory for precleaning metal specimens is as follows:

	Per Cent by Weight
Anhydrous sodium metasilicate	30
Alkyl aryl sodium sulfonate, 85% active	10
Trisodium phosphate, dodecahydrate	35
Soda ash	20
Tetrasodium pyrophosphate, anhydrous	5

Method of Soiling

THE panels are dip-coated into 400 milliliters of soil mixture contained in a metal can. The dimensions of the can should be approximately 4½" x 1¾" x 3¾". A flat type paint can with the head removed adequately serves the purpose. The temperature of the soiling mixture is maintained at 20 ± 0.5°C. during dipping by means of a constant temperature water bath. The specimens are dipped up to the shoulder in the soil mixture and held immersed for two to three minutes. They are then withdrawn from the solution by a Fisher-Payne Dip Coater at a rate of one inch per minute and allowed to drain in a vertical position for 30 minutes. The specimens are then transferred to an oven set at 300°F. and baked for 24 hours.

Variations in Soil Deposits

LABORATORY analysis of hundreds of panels prepared by the described method has shown that the average soil weight applied is 0.145 grams per panel with a coefficient of variation of 10 percent. The largest source of variation in the soil weights is attributed to slight differences in available surface area and dipping technique. In general, it has been found expedient to dip four panels simultaneously into the soiling mixture. For this purpose the metals are placed on a threaded brass bolt and separated by washers to allow at least ¼-inch space between panels. The specimens are then held rigidly in position by means of a nut and lock washer. The assembly is dipped, drained and baked as a unit.

Method of Test

THERE are a number of possible means of conducting the detergency tests depending on the type of information desired. The panels can be dipped into the test solution for a specified number of dips and then examined for comparative cleanliness, or they can be immersed in the cleaner for a selected period of time. If it is the purpose of the investigation to determine the useful life of the cleaner, multiple panels are deterged until the cleaner is no longer effective.

The method which we prefer is to determine the soil weight on the panel before test, then immerse the soiled specimens into cleaner for 20 minutes, remove from the solution and rinse with either water or naphtha depending on the type of product in question. The cleaned specimens are then dried to constant weight and the amount of soil removed is determined. The cleaning efficiency is calculated as follows:

$$\text{Efficiency} = \frac{\text{Original Soil Weight} - \text{Remaining Soil Weight}}{\text{Original Soil Weight}} \times 100$$

A properly conducted test calls for at least five replicate determinations on each cleaner. The average cleaning efficiency can be used as a quantitative measure of detergency.

Solvent Cleaning Efficiencies

TO ILLUSTRATE the type of information that can prove helpful to the formulator, are the data shown in Table II obtained on various solvents and solvent mixtures by a method similar to the ones previously described.

Development Trends

TODAY, emphasis is on greater product safety both from the health and equipment viewpoints. As evidence, we cite the increasing number of "safety solvents" appearing on the market which have been formulated with relatively nontoxic solvents. Extrapolating this current trend, we believe that the next decade will see a vast reduction in the use of caustic or corrosive materials and solvents which are known to produce undesirable

(*Turn to Page* 173)

Table II. Relative Cleaning Efficiencies

(Trichloroethylene = 100)

Trichloroethylene	100
Methylene chloride	96
Perchloroethylene	94
Xylene	93
Mineral spirits — methylene chloride (1:1)	89
Mineral spirits — amyl acetate (3:1)	85
Medium solvency — aromatic naphtha	85
Mineral spirits — methylene chloride (3:1)	84
Mineral spirits — n-butyl acetate (3:1)	82
Mineral spirits — methylene chloride (5:1)	79
Mineral spirits — ethylene glycol monoethyl ether (9:1)	77
Mineral spirits — perchloroethylene (3:1)	75
Trifluoro 1, 1,, 2 — trichloroethane	70
Cyclohexanone	58

All ratios are by volume.

shampoos...

dishwashing detergents...

floor cleaners...

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SUGGESTED USES:

Automatic laundry and dishwashing detergents, car wash powders, wall and floor cleaners, dairy detergent powders, antiseptic sanitizing detergents, dairy milkstone removers.

THE HYONIC FA SERIES

A group of alkylolamide derivatives (Of these, FA 20 and FA 40 are 100% active; FA 75 is 70% active)

SUGGESTED USES:

Dairy cleaners, household degreasers, wax emulsions, floor cleaners, liquid steam cleaners, bottle washing compounds, rug shampoos, window cleaners, bar glass cleaners, liquid scouring concentrates.

HYONIC FS

100% active lauric acid alkylolamide condensate

SUGGESTED USES:

Shampoos, bubble baths, cosmetics, liquid dishwashers.

Superior foam stabilizer for anionics. Excellent detergent and wetter, and shows remarkable detergency synergism when blended with anionics or nonionics.

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DOW

"Locked in the Versene claw"—that's the fate of metal ions when they encounter chelation. They become trapped within the inner ring structure of a newly formed compound where they cannot hinder processing or mar product quality. This phrase is taking on new meaning for detergent manufacturers, as the chemistry of chelation is reviewed.

The Chemistry of Chelation: Part IV

Applications in the detergent industry · Hard Soaps Liquid Soaps · Syndets · A new kind of chemistry?

As has been discussed previously, the Versene® series and Versenol® series chelating agents will inactivate practically all metal ions they contact in solution. The pH factor of the solution or of the finished product influences the choice of agent. To control iron in caustic solutions, look to Versene T®; in alkaline solutions—Versene Fe-3 Specific®; in acid—the Versene series. Or if solutions drift from one pH value to another, an effective Versene combination can be devised. If the right Versene or combination is properly used, processing is improved, and exceptional results are realized. For, unlike polyphosphates that lose effectiveness in alkaline media and at high temperatures, the Versene remains stable; is many times more effective; and can be used alone or with polyphosphates in the formulating of practically all forms of detergents.

HARD SOAPS

The old stand-by, soap, is still the best emulsifier for greases and oils. And with Versene formulated into the product, calcium and magnesium ions become inactivated in solution; no hard-water soap scum can precipitate. In laundry soaps, this chelation action also means that insoluble deposits from previous washings are removed from the laundered cloth. At the same time, the cloth's original softness is restored. Proteinaceous soil is easily solubilized.

The use of such a Versene-formulated product often eliminates the bleach operation and several rinses in power laundries.

LIQUID SOAPS

Chelating agents improve liquid soaps in several ways. To begin with, a Versene-compounded product made using tap water has the same clarity as one made with distilled or rain water. Such soaps are lighter colored and protected against rancidity and change of color. In addition, silica deposit is retarded when the soap is stored in glass. Concentrated liquid soaps which can be diluted with hard water are obtained through use of additional Versene.

Because Versene inactivates all the metallic salts which produce insoluble soaps, the filtration step of the manufacturing process is simplified. Chilling is eliminated, since no calcium or magnesium soap is present to precipitate when the temperature is lowered. Finished liquid soap does not clog dispensing equipment.

Ordinarily, the correct amount of the chelating agent is simply added to the saponification mixture. If necessary, however, it can be added to the liquid soap after saponification. In the latter case, Versene 9 is recommended. Versene 9 has the same pH—9.3—in dilute solutions as liquid soap, hence large amounts may be added to the finished product without changing its pH.

SYNDETS

Since synthetic detergents do not form insoluble soaps, it is commonly believed that their action is independent of water hardness. This notion is erroneous—syndets react to form calcium and magnesium salts with a resulting loss of detergency; the only difference is that the salts are soluble, hence cannot be seen. In certain instances, detergents also form precipitates through reaction with iron and various other divalent metallic salts. For these reasons, chelation with Versene, Versenol, or Versene Fe-3 Specific is an important factor in syndets.

With detergents, Versene is best introduced during the manufacturing process. If this is not possible, the bead form of Versene can be added to the builder, which is then mixed with the detergent. Two and one-half times as bulky as the powdered form, the beads will not stratify when packaged.

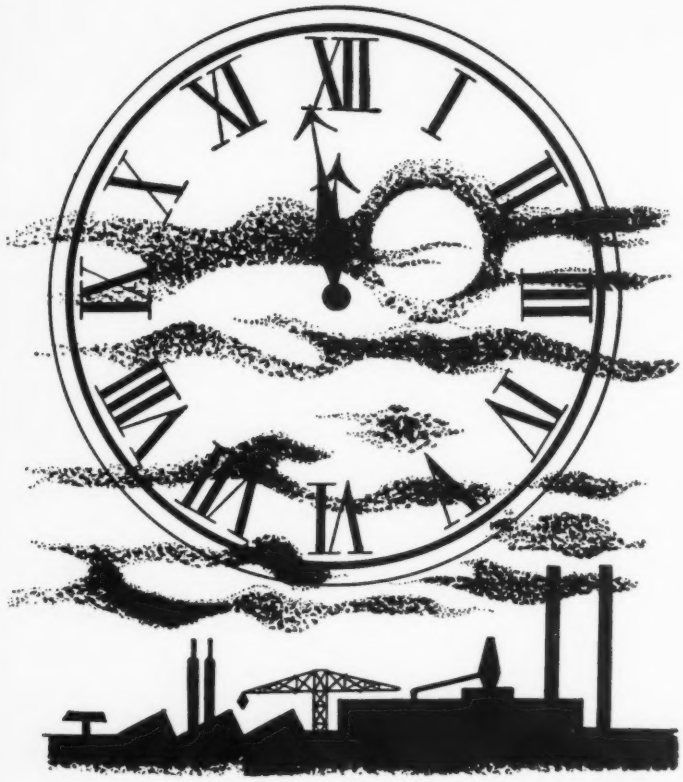
A NEW KIND OF CHEMISTRY?

Is chelation the answer to all ion contamination difficulties? Despite its many successful applications, the answer is sometimes "no." For, remarkable as it is—in locking up metal ions to simplify processing and improve detergent products of every kind—chelation does not solve all problems in every application. But wherever metal ions do pose a problem, investigation is worthwhile. And we'll help in every way possible. To see if you can put Versene or Versenol products to profitable use, write Technical Service and Development, Dept. SC 903H, THE DOW CHEMICAL COMPANY, Midland, Michigan.

you can depend on DOW CHEMICALS DOW

DEADLINE—MIDNIGHT

How Quick Service Paid Off For One Of The Nation's Leading Vitamin Producers



Fast action was called for. Through an oversight, one of America's leading pharmaceutical manufacturers was in trouble. His supply of extraction solvents—vital in vitamin processing was almost gone. 2000 gallons of solvents were needed by Saturday midnight. Otherwise, the production line would shut down, spoilage would result, men would be laid off, production schedules would be disrupted.

The time was Saturday afternoon.

The P.A. called the salesman. He'd gone fishing. But his home contacted the sales manager. The sales manager called the plant manager. "Meet me at the plant," he said. Together, they called a transport driver. Personally, they filled the transport and the order was delivered before dinner.

Out of ordinary service? Of course—but it's the kind you get from your nearby Solvents and Chemicals Bulk Plant. Prove it to yourself. Call today for information, prices and samples.

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Alcohols and Acetates
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SIPEX
SIPONICS

ALCOLAC News

SIPON
SIPONOLS

American Alcolac Corp. Baltimore, Md. September, 1956

TWO NEW DETERGENTS OPEN UP WIDE RANGE OF PROFITABLE FORMULATION OPPORTUNITIES

Two new products—one a modified fatty alcohol sulfate with unusual properties (low cloud point, high foam height), and the other a low-cost, high active content lauryl sulfate powder—have been developed by American Alcolac. Both are uniquely adapted to the development of profitable cosmetic and specialty formulations. They are tradenamed SIPON ES and SIPEX OP, respectively.

NEW PROCESS SLASHES DETERGENT COSTS

A new process, perfected by Alcolac engineers, has been put into commercial use at the company's Baltimore plant. As a result of this new process, and the newly installed special plant unit, Alcolac now offers a sodium lauryl sulfate powder at a price substantially below that of other commercial lauryl sulfate powders, under the tradename of SIPEX OP.

It is a 75% active, white powder. Beside low cost, it has a lower dusting tendency and higher bulk. It is ideal for compounding free flowing, powdered formulations.

Typical Analysis:

Sodium lauryl sulfate...	75%
Free lauryl alcohol.....	2%
Sodium bicarbonate	20%
Moisture	3%

Uses:

Sipex OP is an excellent, economical base for dry powdered formulations. Because it has a high active content (75%) it can be formulated into products with a wide range of concentration. It can be extended with sodium sulfate, or built with the usual alkaline builders. It can also be incorporated into liquid blends—to boost foam and detergency—as long as the pH is kept on the alkaline side.

Cosmetics: Powdered Shampoos
Bubble Baths

Household: Scouring Powders
Floor and Wall Cleaners
Hand dishwashing powders
Light and heavy duty detergents

Industrial: Maintenance Cleaners
Car Washing Compounds
Bottle Washing Compounds
Rug and Upholstery Cleaners
Metal Cleaners

Sipex OP can be used wherever high foaming and good detergency are required. And its lower price and high effectiveness make it an economical product to use.

HIGH FOAM, LOW CLOUD

Fatty alcohol sulfates have long been the ingredients - of - choice for quality shampoos. They have good color and odor, low irritant properties, excellent foam stability in moderately hard water. However, for certain applications a lower cloud point and better foaming in hard water are desirable. SIPON ES a sodium lauryl *ether* sulfate, is a new compound chemically different from lauryl sulfate. SIPON ES boasts all the virtues of the alcohol sulfates and in addition has the following desirable properties.

- Very low cloud point (below freezing)
- Clear solubility in the hardest water
- Very high foam, unaffected by water of any hardness
- Excellent solubility in presence of high concentrations of electrolytes.

These remarkable properties of SIPON ES make the new surface active agent particularly suitable for use in high quality cosmetic and specialty items. It is for instance an ideal and economical base for clear liquid shampoos. Its high tolerance for electrolytes in solution makes SIPON ES especially suited for *light and heavy duty liquid detergents.*

HERE ARE SIPON ES' MAIN CHARACTERISTICS:

- Pale yellow, clear, viscous liquid
- Odor — Mild
- Cloud Point — minus 4° to minus 6° Cent.
- pH of 10% solution — 7.5 to 8.0

VISCOSITY: A wide range of viscosities can be obtained by the addition of very small amounts of sodium or ammonium chloride, lauryl alcohol, lauryl ethers or certain fatty amides.

STABILITY: SIPON ES is indefinitely stable under normal storage conditions. It is stable to oxidation, in presence of alkaline builders and all metal ions. It is clearly soluble and stable in the hardest water. SIPON ES has less tendency to hydrolyze than lauryl sulfates; it is stable at pH values above 3.

COMPATIBILITY: SIPON ES is an anionic—It is compatible with anionics and nonionics but incompatible with true cationics. It is compatible with soap and all alkaline builders.

FOAMING: SIPON ES is an outstanding foamer. At low concentrations it is superior to most commercial surfactants in soft water; vastly superior in very hard water.

WETTING: SIPON ES is a good wetting agent. In distilled water .3% SIPON ES wets cotton tape in 7 seconds; in 300 ppm hard water in 5 seconds.

USES: SIPON ES is particularly well designed for use in shampoo formulations; it also has real potential as a base for liquid light and heavy-duty detergents, and other quality household and cosmetic products.

SAVINGS: Significantly, even though SIPON ES has all these added features, it is priced competitively to conventional sodium lauryl sulfates. Moreover, in many applications, SIPON ES can be used effectively at much lower concentrations, which means: higher performance at lower cost.

SAMPLES and TECHNICAL DATA ARE AVAILABLE

Mail the coupon below for generous samples and technical data.

CLIP AND MAIL THIS COUPON

AMERICAN ALCOLAC CORP., 3440 Fairfield Rd., Baltimore 26, Md.

Please send samples and complete information on:

SIPON ES SIPEX OP Powder

and data on use for the following application: .....

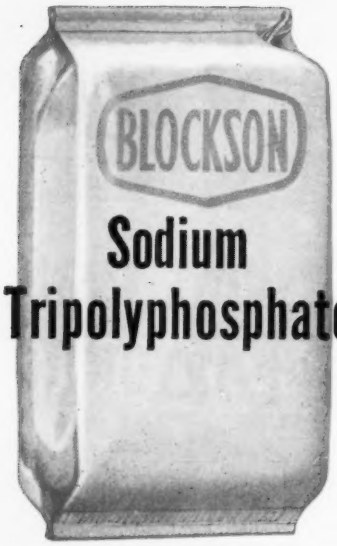
.....

NAME ..... TITLE .....

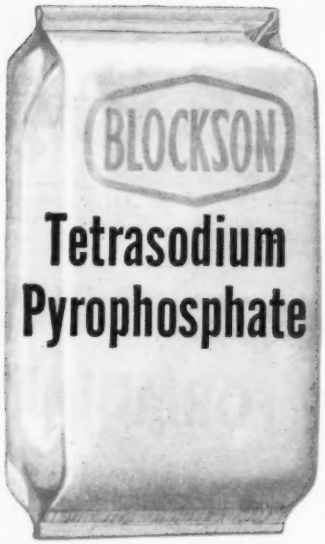
COMPANY .....

ADDRESS .....

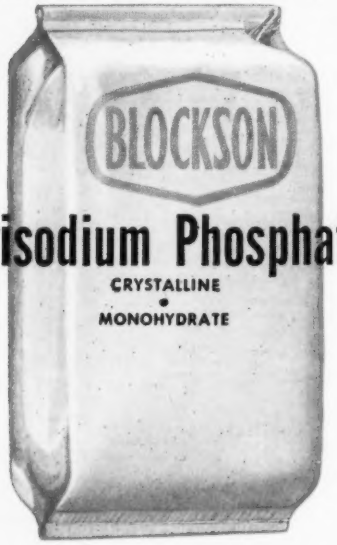
CITY ..... ZONE.... STATE.....



Sodium Tripolyphosphate

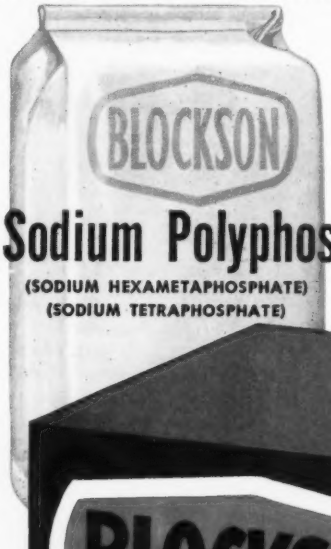


Tetrasodium Pyrophosphate



Trisodium Phosphate

CRYSTALLINE
•
MONOHYDRATE



Sodium Polyphos

(SODIUM HEXAMETAPHOSPHATE)
(SODIUM TETRAPHOSPHATE)

Sodium Polyphos is Blockson's brand name for a water soluble Glassy Sodium Phosphate with the desirable characteristics of Sodium Hexametaphosphate and Sodium Tetraphosphate.

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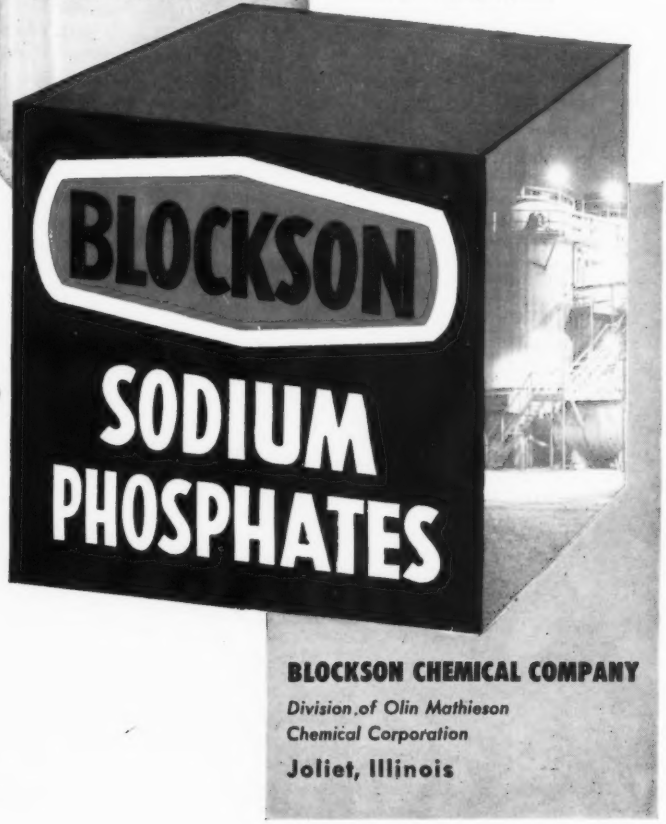

BLOCKSON CHEMICAL COMPANY
Division of Olin Mathieson Chemical Corporation
Joliet, Illinois

News

Girvan Tesco V. P.

The election of John W. Girvan to the position of vice-president in charge of sales, Tesco

John W. Girvan

Chemicals, Inc., Atlanta Ga., was recently announced by T. Erwin Schneider, Sr., president. Mr. Girvan was formerly the firm's general sales manager. In his new post, Mr. Girvan will be in charge of the company's institutional, industrial and retail divisions throughout eleven southeastern states. He has been with Tesco eight years and has served as general sales manager since 1953.

—★—

Ultra Chicago Plant

The construction in Chicago of a $500,000 manufacturing plant for Ultra Chemical Works, Inc., Paterson, N. J., was announced recently by Dr. Henry Ruegg, board chairman. Dr. Ruegg said that the new plant will enable Ultra to manufacture its line of synthetic detergents intermediates in the midwest. The new structure adjoins the Chicago properties of Witco Chemical Co., with which Ultra is associated.

—★—

Shell Cuts Glycerine Price

Shell Chemical Corp., New York, has reduced the price of its refined synthetic glycerine two cents per pound, effective August 29. The reduction brings the price to 28 cents per pound when delivered in tank car lots; 29½ cents per pound in drums ordered by the carload and to 30 cents per pound when purchased by the single drum.

Shell, the discoverer of the process for making glycerine from petroleum and the largest producer of the product, was the first of the larger suppliers to cut its prices in over two years.

—★—

New Super-Rinse "All"

The introduction of a new controlled suds detergent for automatic washers, called "new super-rinse 'All'," was announced recently by Roy L. Branderburger, vice-president of Monsanto Chemical Co., St. Louis, and manager of its consumer products division. The product will be sold in 24 eastern states. Plans for its merchandising in other areas will be announced at a later date.

The new "All" contains a combination of wetting agent and brightener. It will be marketed in 24 ounce, 10 and 23 pound packages, 25 pound pails, and in 50 and 100 pound drums. All of the packages have been newly designed. A feature of the 23 pound package is a high-strength, rayon-and-kraft handle built into a tear-strip opening device at the top of the box. A large-scale advertising and promotional program for the new product began in 85 cities, Sept. 10.

—★—

Avon Sales Increase

Net sales and income of Avon Products, Inc., New York, showed an substantial increase for the first six months of 1956, it was recently announced. First half 1956 sales totaled $35,727,554 as compared with $29,110,140 a year earlier. Net income for the six months ended June 30 was $3,104,515, equal to share earnings of $2.19, as against $2,517,878 and $1.77 in the comparable period of 1955.

Alan N. Mendleson Dies

Alan N. Mendleson, 52, for the last five years chairman of the board of directors of B. T. Babbitt,

Alan Mendleson

Inc., New York, died Aug. 14, at Rockland Hospital, Rockland, Me., after an illness of several months. He had been residing at his summer home in Washington, Me.

President of Babbitt from 1946 to 1951, Mr. Mendleson was the third generation of the family to head the concern. His grandfather, the late Aaron Mendleson, and his father, the late Jerome M. Mendleson, had previously been president.

Born in Albany, N. Y., Mr. Mendleson attended the Taft School, Watertown, Conn., and Yale University. He joined Babbitt in 1926 as assistant treasurer, a position he held until 1940. From that year until 1946 Mr. Mendleson served as executive vice-president.

He had served on the board of the Westchester Children's Association and had been active in the Young Men's and Young Women's Hebrew Association in New York.

Surviving are his widow, the former Babette Karfa; two sons, Alan, Jr., of Albany, purchasing agent for the Babbitt plant there, and Jerome M. 2d of New York; a daughter, Jane Irene Mendleson

Win her approval

perfume your detergent with Givaudan *Tergescents*®

Women are always "fragrance-conscious"—a pleasant scent is often the prime factor in her repeat purchases. You can key your household detergents to her preferences with low-cost Givaudan *Tergescents.*

These powerful, appealing fragrances—for liquid or powdered detergents—are especially developed to assure your detergent's success. They will give you outstanding consumer acceptance at very low cost.

Givaudan will be glad to recommend the type of *Tergescent* that is best suited to your product...or we can custom-make a fragrance that exactly fits your specific needs.

GIVAUDAN

GIVAUDAN-DELAWANNA, INC.
330 West 42nd Street, New York 36, N. Y.

of Rockland, Me.; his mother, Mrs. J. Mendleson of New York; and a sister, Mrs. Fremont H. Bruch of Santa Monica, Calif. Samuel Mendleson, who became president of Babbitt in 1951, succeeding Alan N. Mendleson, is his first cousin.

★

New C-P Office

Colgate-Palmolive Co., Jersey City, N. J., recently announced the opening of a new district office in Charlotte, N. C. Located in the Addison Building, the office is headed by E. B. Riggsbee, former supervisor of the Richmond, Va. district. His staff consists of two supervisors and 15 salesmen, all formerly attached to either the Richmond or Atlanta, Ga. districts. The office will serve 51 North Carolina counties, from the Great Smokies to the coast, and all of South Carolina.

★

Lever Appoints Wrisley

The appointment of George A. Wrisley, Jr., to national accounts sales manager for the Lever division of Lever Brothers Co., New York, was announced recently by Ray F. Underwood, general sales manager. A graduate of Dartmouth College, Mr. Wrisley joined the company in January, 1955, and has served as assistant sales manager-personnel and assistant sales manager-special accounts. He previously had been general sales manager of Allen B. Wrisley Co., Chicago, soaps and toiletries firm.

George A. Wrisley, Jr.

Walter Rapelje Dies

Walter Suydam Rapelje, 73, who retired eight years ago as director of research and development

Walter S. Rapelje

for Colgate-Palmolive Co., New York, died Aug. 15, at the Atlantic Beach, L. I., Sun and Surf Club. At the time of his retirement, Mr. Rapelje had been associated with Kirkman & Sons, Brooklyn, and later the Colgate concern for 38 years in various technical and management capacities. In recent years, he was engaged in consulting work in the soap, detergent and allied industries.

Mr. Rapelje received his masters degree in chemistry from Brooklyn Polytechnic Institute in 1904. His first connection with the soap industry was shortly before his graduation when he was employed in the chemical laboratories of B. T. Babbitt, Inc., in their old lower Manhattan plant at Rector and Washington Sts., New York. He was an analytical chemist at the Brooklyn Navy Yard until 1910 when he became chief chemist for Kirkman & Sons, Brooklyn, becoming sucessively assistant-superintendent, superintendent, treasurer, and member of the board of directors. Following the merger of Kirkman with C-P, he became general superintendent of domestic plants for the parent company which position he held until 1940.

Mr. Rapelje was a former president of the Long Island Holland Society, the St. Nicholas Society of Brooklyn and the Hollis Park Gardens Civic Association. Surviving are his widow, the former Gertrude Van Siclen; a brother, Nicholas; and a sister, Mrs. Anna Lauretta Livingston.

★

A. J. Boyer Dies

A. J. Boyer, 67, Philadelphia sales representative for E. F. Houghton & Co., Philadelphia, died at his home in that city, Aug. 20, after an illness of several months. A graduate of Franklin & Marshall College and the Philadelphia Textile Institute, Mr. Boyer was formerly vice-president of the investment firm of Lewis C. Dick Co., Philadelphia. He is survived by his wife, Pauline M.; two daughters, Mrs. George K. Reynolds, Jr., Lancaster, Pa., and Mrs. Ernest E. Hedler, Jr., Hudson, O.; a sister, Mrs. Walter Torpey, Philadelphia, and three grandsons.

★

Speaks On Shampoos

A discussion of shampoos, by R. L. Patterson, head of the industrial research department, Procter & Gamble Co., Cincinati, was to highlight the Sept. 11 meeting of the Chicago Chapter of the Society of Cosmetic Chemists. The title of Mr. Patterson's speech was "Cream Shampoos—Some Factors Affecting Their Consistency."

A graduate of the University of Kentucky, he joined Procter & Gamble in 1945. His research at P&G has been concerned mainly with soap and synthetic detergents for industrial and household uses.

R. L. Patterson

PQ SILICATES

Modern Builders

FOR SYNTHETIC DETERGENTS

PHOTOGRAPHS COURTESY OF HASPEL SELFCAIRE® SUITS & L'AIGLON APPAREL, INC.

Today, silicates of soda are the choice builders for the synthetics. Look into these special advantages; whiter, brighter, cleaner washables because soluble silica in PQ silicates excels as a deflocculant and then serves to prevent the re-deposition of removed soil. Other plus values from the use of PQ silicates as builders are (1) the control of corrosiveness of most synthetic detergent mixtures and (2) a lower cost.

Yes, PQ silicates have proved themselves as effective materials for improving the modern detergents, from deflocculating power to free rinsing properties. There is a PQ soluble silicate to fit all detergents—liquid, paste or dry. Let us discuss how PQ silicates can help you.

1831-1956 METSO PQ 125th ANNIVERSARY

SILICATE OF SODA

METSO DETERGENTS

PHILADELPHIA QUARTZ COMPANY

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Associates: *Philadelphia Quartz Co. of Calif. Berkeley & Los Angeles, Calif., Tacoma, Wash.; National Silicates Limited, Toronto, Canada*

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TRADEMARKS REG. U.S. PAT. OFF.

PQ WORKS: ANDERSON, IND., BALTIMORE, MD., BUFFALO, N. Y. CHESTER, PA., JEFFERSONVILLE, IND., KANSAS CITY, KANS., RAHWAY, N. J., ST. LOUIS, MO., UTICA, ILL.

P & G Sales Top Billion

Procter & Gamble Co., Cincinnati, for the first time in its 119-year history had net sales in excess of a billion dollars, it was announced last month. Sales for the fiscal year ended June 30th were $1,038,290,374, compared with $965,797,159 in the previous year. Consolidated net earnings for the fiscal year were reported at $59,316,471, third highest on record. The net is equal to $3.05 per share on the common stock outstanding at the year-end after the stock split effective last June 1 that doubled the outstanding shares. Last year the net was $57,471,371 or $2.96 per share, based on the same number of shares. Provision for taxes totaled $61,612,218, compared with $67,088,197 last year.

In a letter to stockholders, R. R. Deupree, chairman, and Neil McElroy, president, cited the continuing benefit derived from the company's research and development program, and the expansion of sales, advertising and promotion organizations as the key to keeping P&G in a foremost position in a sharply competitive era. In reviewing the firm's fiscal year, Messrs. Deupree and McElroy stated that the economy of the U. S. has moved up sharply since 1945. "With population growing rapidly and the standard of living increasing, we have had to spend large amounts on factories and equipment in order to maintain our position in the fields in which we operate," they said.

Referring to the company's contemplated issuance of debentures amounting to 70 million dollars, the P&G executives stated that while the company has over the years been able to finance itself mainly out of retained earnings, the rapid growth of the past ten years has made this more and more difficult. "With improved products and the new ones which have come into being since 1945, it is essential," they said, "that we fortify ourselves with money in order to take advantage of the opportunities for growth and progress which these products present."

In summing up, Messrs. Deupree and McElroy said, "It seems to us that we have real company strength, a good organization and good operation. With the general economy of the country on a sound basis, we look forward with confidence to the next 12 months."

★

Dismiss Anti-Trust Suit

A four-year-old civil anti-trust suit against three leading manufacturers of soaps and detergents and their trade association has been dismissed at the request of the Government, it was announced late last month. Involved are Procter & Gamble Co., Cincinnati; Lever Brothers Co., New York; Colgate-Palmolive Co., Jersey City, N. J. and the Association of American Soap and Glycerine Producers, Inc., New York.

The dismissal was requested by representatives of Attorney General Herbert Brownell, Jr. to permit the Government to appeal to the United States Supreme Court an order of Federal Judge Alfred E. Modarelli. The judge had ordered that the entire grand jury proceedings of the suit be made available to the defendants within thirty days. Counsel for the defendants had previously requested the panel's minutes to prepare their defense.

The attorney general said it was against the public interest to surrender the grand jury's proceedings. He also indicated that he considered the order unprecedented and of such importance that it should be reviewed by the Supreme Court.

The grand jury conducted its inquiry for eighteen months in 1951 and 1952 without returning an indictment or presentment.

★

Tidy House Names Church

William Church has been named sales manager of Tidy House Products Co., Shenandoah, Ia., it was announced recently by J. C. Rapp, president. Mr. Church was formerly merchandising manager of Beach Candy Co., Chicago.

Buys Great Stuff Prods.

Larkin Soap Corp., Inc., a subsidiary of Magnus Chemical Co., Garwood, N. J., has purchased Great Stuff Products Co., West New York, N. J., effective July 31, it was recently announced. Larkin was acquired by Magnus in Sept. 1951. All physical assets will be transferred to the Larkin plant at Garwood. Great Stuff Products Co., makers of hand soaps and cleaners, was established in 1919 by Edward J. and George Sella, who have announced their retirement from business. George Sella served on the board of directors of the Association of American Soap and Glycerine Products, in 1950 and '51.

★

Detergents AOCS Topic

An all-day symposium on detergents will be the highlight of the 47th annual convention of the American Oil Chemists Society to be held Sept. 24 to 26 at the Hotel Sherman in Chicago.

The symposium, which will take place on the final day of the meeting, will feature the following topics and speakers: "Introduction to Field of Detergents", by W. M. Bright, Lever Brothers Co.; "Alkylaryl Sulfonates", by J. Kircher, Continental Oil Co.; "Fatty Alcohol Sulfates", by D. B. Hatcher, Stepan Chemical Co.; "Alkyloamides", by Jerome Kritchevsky, Ninol Laboratories, Inc.; "Non-ionic Detergents", by Chapin Stevens, Antara Chemicals Division, General Aniline and Film Corp.; "Amphoteric Surfactants", by D. L. Anderson, General Mills, Inc.; "Sugar Esters", by L. Osipow, Foster D. Snell, Inc.; "Analytical Test Methods – Organic", by W. G. Spangler, Colgate-Palmolive Co., and "Inorganic", by J. C. Harris, Monsanto Chemical Co.; "Physical Test Methods", by a speaker to be announced; "Applications of Synthetics", by Carl Pacifico, American Alcolac Corp.; "New Applications – Oil Field Flooding", by C. E. Johnson, Jr., California Research Corp.; and "Soil Conditioning", by J. L. Seymour, Illinois Farm Supply Co.

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An Aldehyde of great stability and of such high degree of purity that it can be used in the finest perfume extracts as well as soaps and cosmetics.

RESEDALIA

An Acetal resembling the aroma of Reseda Mignonette. It is a valuable addition to all floral bouquets, and as a modifier for the purpose of rounding off all types of compositions.

VERONOL

An Aldehyde of great potency; imparts the aldehydic top note to perfumes to which it is added. It is extremely valuable as a modifier. Used from 1/10 to ¼ of 1%.

ROSANOL

An Acetal, ideal for all rose type compounds, because of its fine character, great lift and extreme stability.

The advantage of these aromatic chemicals is that their great purity permits their use in the most luxurious perfumes . . . and their low cost makes them feasible for even the most inexpensive soap fragrances.

Sole Representative in the United States for J. and E. Sozio, Grasse, France

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Aromatics Division

VERONA CHEMICAL COMPANY

Plant and Main Office: 26 Verona Avenue, Newark, N. J.

1210 Rosedale Avenue, Chicago, Ill.

First Half Soap and Syndet Sales Rise

SALES of soaps and synthetic detergents showed a substantial gain in the first six months of 1956, increasing 15.3 percent in tonnage and 11.7 percent in dollar value, as compared with the corresponding period of 1955, according to figures released last month by the Association of American Soap & Glycerine Producers, Inc., New York. The report was compiled from data submitted by 74 member companies.

Sales of synthetic detergents in powder and liquid forms amounted to 1,376,311,000 pounds, valued at $302,661,000, in the first half of this year and now represent approximately 65 percent of the market for soaps and detergents. The first half 1956 total is 25.4 percent greater in tonnage and 19.0 percent higher in dollar value than the comparable period a year ago when 1,097,567,000 pounds, worth $254,395,000 were reported. Tonnage sales of synthetic detergents dropped slightly in the second quarter of 1956 to 682,196,000 pounds, from a first quarter total of 694,142,000 pounds, a decline of 1.7 percent.

Tonnage sales of liquid synthetic detergents increased sharply in the first six months of this year, going ahead of last year's first half by 82.6 percent. 130,072,000 pounds of liquid synthetics, valued at $53,095,000, were reported sold in the first six months of this year, as against 69,848,000 pounds, valued at $35,351,000, in the first half of 1955. In the second quarter of this year tonnage sales were 3.2 percent higher than in the first quarter, and 78.2 percent over the second quarter of 1955. Liquid synthetic detergents sales in the second quarter of 1956 totaled 66,072,000 pounds, as compared with 64,008,000 pounds in the first quarter, and 37,080,000 pounds in the second quarter a year ago.

Solid synthetic detergent sales amounted to 1,246,239,000 pounds, valued at $249,566,000, in the first half of 1956, compared with 1,027,719,000 pounds, worth $211,114,000 in the corresponding period a year ago. Second quarter tonnage sales of solid detergents this year dropped slightly to 616,105,000 pounds, from the 630,134,000 pound total in the first quarter of 1956. Sales in the second quarter a year ago were 507,646,000 pounds.

Total other than liquid soap sales for the first half of 1956 declined slightly to 631,157,000 pounds, worth $150,061,000, from 640,494,000 pounds, valued at $150,617,000, for the comparable period last year.

Tonnage sales of other than liquid soaps in the second quarter were reported to be 316,238,000 pounds, valued at $75,890,000, as against a first quarter total of 293,048,000 pounds, worth $70,807,000. In the second quarter of 1955 other than liquid soap sales were reported as 300,961,000 pounds with a value of $72,130,000.

Total liquid soap sales in the first half of this year as reported by 40 manufacturers amounted to 2,318,000 gallons, valued at $4,044,000. In the comparable period of 1955, 43 manufacturers reported sales of 2,364,000 gallons, worth $3,735,000.

Total soap and detergent sales reported by AASGP members in first half of 1956

	Pounds	Dollars
Soaps other than liquid	631,157,000	150,061,000
Liquid soaps	18,554,000	4,044,000
Total sales value		**154,105,000**
Bar toilet soaps, incl. mechanics	245,184,000	75,139,000
Yellow and other than white laundry bars	27,771,000	3,204,000
White laundry bars	85,454,000	14,926,000
Soap, chips and flakes, pkgd.	31,494,000	8,664,000
Soap, chips and flakes, bulk	55,543,000	6,468,000
Soap, granulated, powdered, sprayed, pkgd.	103,865,000	25,354,000
Soap, granulated, powdered, sprayed, bulk	47,281,000	5,431,000
Miscellaneous or "other" soaps	987,000	161,000
Shaving soap	1,634,000	1,097,000
Shaving cream	7,117,000	6,600,000
Paste and jelly soaps	7,819,000	1,095,000
Washing powders, pkgd.	2,149,000	216,000
Washing powders, bulk	7,799,000	643,000
Hand pastes	3,037,000	387,000
Hand powders	4,023,000	676,000
Liquid soaps, other than packaged shampoos	2,233,000*	3,417,000
Shampoos, pkgd.	85,000*	627,000
Detergent shampoos, solid	9,016,000	5,686,000
Detergent shampoos, liquid	4,176,000	6,185,000
Total	**265,435,000**	**165,979,000**
Detergent, solid, other than shampoo, pkgd.	1,108,044,000	231,591,000
Detergent, solid, other than shampoo, bulk	129,179,000	12,289,000
Detergent, liquid, other than shampoo, pkgd.	14,115,000*	44,748,000
Detergent, liquid, other than shampoo, bulk	1,622,000*	2,162,000
Detergent shampoos, liquid	4,176,000	6,185,000
Detergent shampoos, solid	9,016,000	5,686,000

* Expressed in gallons.

Monsanto Names Reed

Thomas S. Reed, has been appointed assistant director of sales in the consumer products division, it was recently announced by Monsanto Chemical Co., St. Louis. Mr. Reed had been district sales manager in Columbus since July, 1955. He is succeeded by William L. Cowen, formerly district sales manager for the division in Philadelphia.

The company also announced that William Wood, assistant district sales manager at Philadelphia has been made district sales manager in Boston while Robert Lawrence, regional sales manager in St. Louis, has been appointed district sales manager in Kansas City, Mo., replacing John B. Ferguson who has been transferred to Chicago. In another organizational change, Raymond C. Compton, district sales manager in Boston has been transferred to a similar position in Philadelphia.

Bubbles with a man-sized job to do

Removing the grit and grime from a well-traveled automobile requires a cleaner with muscles. Leading synthetic detergents compounded with Atlantic Ultrawets can be made rugged enough to leave a clean, streakless shine on cars and locomotives, gentle enough for feminine hands and the finest fabrics. This is so because each of the Ultrawets has been specifically designed to do its cleaning job better.

The Ultrawets are only one member of the Atlantic family of petrochemicals (so you see a miniature oil refinery in the picture). Many new and profitable uses for these versatile Atlantic petrochemicals are constantly being applied in cost-cutting processes, in the development of new products and the improvement of well-established brands. For further information on Atlantic petrochemicals and service, write or wire The Atlantic Refining Company, Dept. E-9, at the nearest office listed below.

ATLANTIC PETROLEUM CHEMICALS

Philadelphia
Providence
Charlotte
Chicago

In the West: L. H. Butcher Co.

In Canada: Naugatuck Chemicals Division of Dominion Rubber Company, Ltd.

In Europe: Atlantic Chemicals SAB, Antwerp, Belgium

In South America: Atlantic Refining Company of Brazil, Rio de Janeiro

Lever Names Wood

Richard C. Wood has been appointed industrial detergent products sales manager for Lever Brothers Co., New York, it was announced recently by W. H. Cochrane, general manager of the company's industrial division. In his new position, Mr. Wood will be responsible for the marketing of industrial soaps, detergents, and hotel size soaps. He joined Lever in 1955 as development manager for the industrial division. Previously he had held sales management posts with both Commercial Solvents Corp., New York, and General Aniline and Film Corp., New York.

Richard C. Wood

Mr. Wood succeeds Alfred A. Michaud who is understood to be engaged in public relations work with the Avocado Growers Institute in California. Before coming to New York, Mr. Michaud held the position of central district sales manager for industrial detergents in Lever's Chicago office. He joined Lever in 1954.

★

Form Vat Dye Institute

Formation of the Vat Dye Institute, and the election as president of D. C. Newman, director of sales, dyes and chemicals division, E. I. duPont de Nemours & Co., Wilmington, Del., was announced recently. The organization will make its headquarters in the Empire State Building, 350 Fifth Ave., New York. The institute has been established to promote the use and consumption of vat colors through a wide-scale information and educational program for consumers and the trade. Henry F. Herrmann, formerly general marketing manager of General Dyestuff Corp., a division of General Aniline and Film Corp., New York, was elected executive secretary. Other officers include Keith R. J. Horner, Toms River-Cincinnati Chemical Corp., Toms River, N. J., vice-president, and H. J. Diagneault, vice-president, National Aniline Division of Allied Chemical and Dye Corp., New York, treasurer.

Henry F. Herrmann

At the first meeting of the Institute's board of directors J. Robert Bonnar, former sales manager of GDC, was appointed chairman of the technical committee, while James L. Naylor, manager of the dyes department, American Cyanamid Co., New York, was named chairman of the production committee. Mr. Diagneault was also appointed chairman of the sales committee. The Institute's first general membership meeting, which it is expected will be attended by the majority of manufacturers of vat dyes in the U. S., is scheduled to be held Oct. 9th in New York.

★

Barns to Colgate

Phillip M. Barns has joined the Colgate-Palmolive Co., New York, as assistant director of television and radio. He will serve under George T. Laboda, director of television and radio.

Emery Names Connelly

Robert F. Connelly has been appointed west coast field representative for the organic sales department of Emery Industries, Inc., Cincinnati, it was announced recently by R. F. Brown, department manager. Mr. Connelly will be responsible for sales of all organic chemicals in the area. Prior to joining Emery, he had served the Bray Oil Co. in a research and development capacity, and the Shell Oil Co. in a similar role. He is a graduate of California Institute of Technology with a B.S. in organic chemistry.

Robert F. Connelly

★

"Pin Busters" Under Way

The bowling auxiliary of Chicago-Perfumery Soap and Extract Association, commenced its 1956-57 "Pin Busters" league season, Monday, Sept. 10, it was announced recently. The league, which bowls at Cascade Bowling Center, Chicago, will meet at 6:15 P.M. each Monday throughout the season.

★

Soap Firm Incorporates

American Transparent Soap Co., Inc., soaps, cosmetics, etc., care of Meyer Pincus, 122 E. 42nd St., New York 17, N. Y., recently was granted a charter of incorporation listing capital stock of 200 shares of $100 par value. The directors of the corporation are William M. Ivler, I. Meyer Pincus and Zevie B. Schizer, all of New York.

NOW! ONE CALL...ONE SOURCE for detergent flakes, powders, beads, liquids, slurries!

All your detergent needs can now be filled from one reliable source . . . in liquids, slurries, flakes, powders and beads. In the manufacture of detergents, Ultra Chemical Works maintains highest standards for uniform activity and density to give you the finest detergents for your specific application. *And* you can combine all products for quantity price!

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ALKYL ARYL SULFONATES (Dodecyl Benzine Sulfonates)

Spray-Dried

Sulframin* AB 40 Beads (Neutral)
Sulframin HD Beads (Built)

Drum-Dried

Sulframin AB Conc. Flake and Powder
Sulframin AB 40 Flake and Powder

Liquids and Slurries

Sulframin E Liquid
Sulframin KE Liquid
Sulframin L (with foam stabilizer)
Sulframin L Conc. (45% active)
Sulframin AB Slurry

NON-IONIC SPRAY-DRIED BEADS

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For further information on these and other detergents mail the coupon at left.

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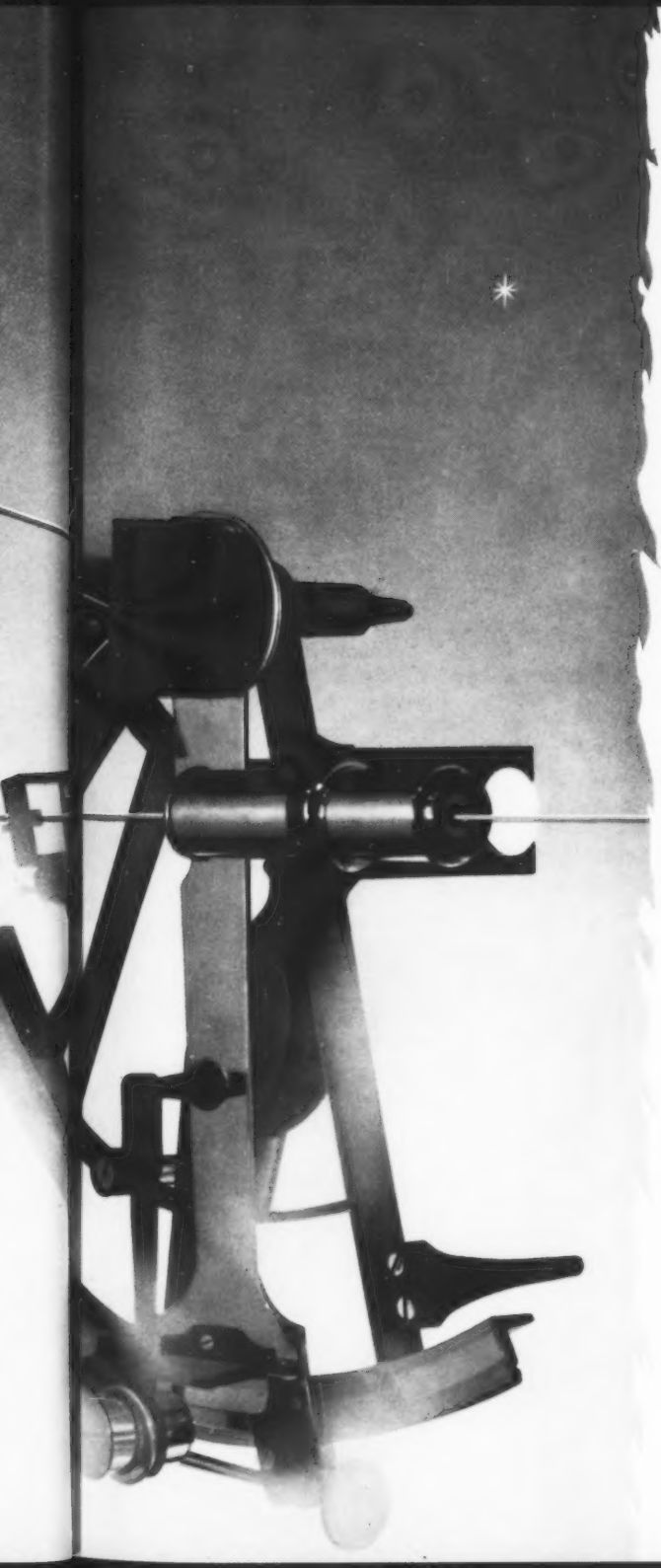

The creation of a fragrance that brings success to a perfume or cosmetic demands superior skill and artistry—and a thorough knowledge of consumer preferences.

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for buyers of

Caustic Potash
Caustic Soda
Paradichlorobenzene

New data sheet on Caustic Potash

We have just completed a data sheet on Nialk® Caustic Potash—one of the newest members of the Hooker roster of chemicals.

We believe you'll find that the new specifications measure up in every way to the high Nialk standards of the past.

If you use caustic potash and purchase other Hooker chemicals such as caustic soda, it might pay you to look into the possible savings of a consolidated source of supply.

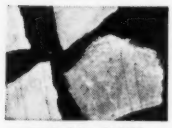
You can get Nialk Caustic Potash, in standard and low-chloride grades, in 45% to 52% liquid solutions; and in the following solid forms, as 90% and as 85% (low chloride) material: solid, flake, granulated, broken, crushed, powdered, and walnut.

The liquid forms are shipped in tank cars of 4,000 to 10,000-gallon capacity. Solid forms are shipped in steel drums.

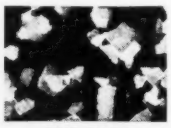
To keep your file up-to-date, send for the new data sheet. Just check and mail the coupon.

Especially good for repackaging

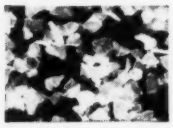
in cleansers and other specialties are these four sizes of Hooker flake caustic soda, all shown actual size.



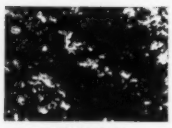
REGULAR FLAKE



FINE FLAKE



CRYSTAL FLAKE



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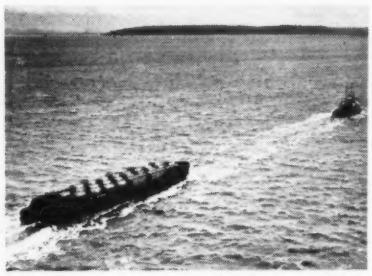
"Regular," "fine," and *"crystal"* sizes are non-dusting.

With these flakes, you're sure of actually *getting* the size you order. In a tightly controlled flaking-screening operation, we make the flakes just thick enough to stand up well and stay the same size in transit.

Regular flake is shipped in 100-lb. and 400-lb. steel drums; the other sizes in 450-lb. steel drums.



Caustic Soda by barge might save you money

Nearby navigable water could make a big difference in the amount you pay for caustic soda and other heavy chemicals.

Some of our customers save up to tens of thousands of dollars a year because they receive more cheaply by barge.

The single barge shown here, for example, is on its way to a pulp mill with 11 tank cars of chemicals above deck, 1000 tons of liquid caustic soda below.

Your Hooker salesman can help you discover whether you can receive caustic and/or other Hooker Chemicals more cheaply by barge from one of our plants or stock points.

See coupon for helpful booklet on buying caustic soda.

7 ways to make money with Paradi®

If you are marketing paradichlorobenzene products, you can make money seven ways with Paradi (Hooker Paradichlorobenzene).

With the seven sizes discussed below you can round out your line, perhaps even get into new markets.

Repackaging. Three sizes of uniform, sparkling crystals (Pea Nos. 1 and 2, Rice No. 1). These 100% pure crystals sublime completely, without stain or residue.

Molding or compressing. Three more sizes developed especially for automatic presses (Rice No. 2), for foot-operated presses (Rice No. 3), and for melting (Powdered). All give you firm, dry blocks of exceptional brilliance.

Agricultural selling. Use Granulated Paradi—a popular bulk-package size, recommended as an insecticide, and in some cases as a fungicide, and as a weed killer.

For a helpful bulletin on Paradi and advice on repackaging, check the coupon. For samples of Paradi, write us on your business letterhead.

Check items you'd like to receive:

- ☐ Technical data on standard grade Nialk Caustic Potash.
- ☐ *Caustic Soda Buyer's Guide.* Lists advantages of 50% and 73% solutions; comparative costs; capacities of tank cars and other containers; useful shipping information.
- ☐ Technical data on liquid, flake, and solid caustic soda.
- ☐ Bulletin No. 454, Paradi.

For information on these Hooker chemicals used in soaps, detergents, cleansers, polishes, and other specialties, check here:

- ☐ Cyclohexanol
- ☐ ortho-Dichlorobenzene
- ☐ Sodium Sulfide

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80% dodecyl benzene sodium sulphonate

NANSA S. POWDER
40% spray dried dodecyl benzene sodium sulphonate

NANSA LIQUID
built alkyl aryl sodium sulphonate liquid

NANSA U. C. POWDER
bead type totally spray dried synthetic detergents containing molecularly condensed phosphates, carboxy-methyl-cellulose, silicates, foam builders, etc.

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HIGHER ALIPHATIC ALCOHOLS
by high pressure hydrogenation

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SODIUM LAURYL SULPHATE
spray dried powder to U.S.P. & B.P. specification

TRIETHANOLAMINE LAURYL SULPHATE
for shampoos, toilet preparations and liquid cleansers

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non-dusty, for toothpastes, cream shampoos and industrial use

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emulsifiers, surface tension modifiers, coupling agents

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ORGANIC DIVISION: fatty alcohol sulphates (EMPICOLS), emulsifiers (EMPILANS), self-emulsifying waxes (EMPIWAXES), alkyl aryl sulphonates (NANSAS) and other detergent bases, additives and emulsifiers in powder, paste and liquid forms.

INORGANIC DIVISION: phosphoric acid and complex phosphates.

Whatever shampoo she prefers

THERE'S A DU PONT DETERGENT TO MAKE IT BETTER!

DUPONOL* EP—for better clear liquid shampoo. This detergent gives you the same, high-quality results every single batch: a fine, pale golden shampoo that will not fade or discolor on display. You use less thickener in formulation because "DUPONOL" EP has greater response, retains excellent cleansing action.

DUPONOL* WA PASTE—for better solid-cream shampoo. Formulate with "DUPONOL" WA Paste for the *whitest* shampoo. Will not discolor through heat, aging or light. Less thickener is needed for the desired viscosity; cleansing power is simply controlled while foaming power remains excellent. You get easy, economical formulations.

DUPONOL* WAQ—for better cream lotion shampoo. When you want controlled cleansing, this is the detergent to use. "DUPONOL" WAQ gives your shampoo very good foaming with gentle, non-drying action. Heat, light and aging will not rob your formulation of its *whitest* white color. You'll use less thickener for uniform body and viscosity, too.

FOR BETTER ALL-AROUND RESULTS, call on Du Pont's technical staff for advice and information. We have available informative bulletins containing typical formulas which you may get by writing on your company letterhead to E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Dept., Dyes and Chemicals Division, Wilmington 98, Delaware.

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SURFACE ACTIVE AGENTS

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On Foreign Policy Panel

Luis de Hoyos, vice-president and treasurer of Synfleur Scientific Laboratories, Inc., Monticello, N. Y., participated as a panel speaker at the eighth annual conference on American foreign policy held recently at Colgate University. Mr. de Hoyos represented business on the panel dealing with American foreign affairs in Latin America. Among the featured speakers and guests at the conference were ambassadors from Colombia, Greece, Iraq, China, Ceylon, New Zealand, as well as Jacob Javits, N. Y. State attorney general, Thomas Finletter, former secretary of the air force, and Dr. Jose A. Mora, secretary of the General Organization of American States.

Luis de Hoyos, second from right, vice-president and treasurer, Synfleur Scientific Laboratories, Monticello, N. Y., participates in Latin American panel discussion at the Colgate University conference on American foreign policy. Other members of the panel from left to right are: Joseph M. Marrone, director, foreign trade zones board, Dept. of Commerce; Hon. Paul C. Daniels, former U. S. ambassador to Ecuador and Honduras; Dr. Arthur P. Whitaker, professor of Latin American history, University of Pennsylvania; Milton Bracker, Latin American correspondent, New York Times.

★

Martin Adelmann Dies

Martin Adelmann, for many years a production chemist with Schimmel & Co., New York, died recently while attending the University of Wurzburg's tri-centennial in Wurzburg, Germany. Mr. Adelmann, who retired recently, is survived by his wife, Mrs. Katharina Adelmann, who has also been associated with Schimmel, as a chemist, for many years.

★

Raymond Sales Manager

J. J. Mikschl has been named sales manager of Raymond Laboratories, St. Paul, Minn., it was announced recently. In his new position, Mr. Mikschl will supervise Raymond's chemical sales which are sold nationally through representatives of M. H. Baker Co., Minneapolis. J. C. Zemlin, formerly acting sales manager, will remain as director of research in the research and development department.

J. J. Mikschl, newly elected sales manager of Raymond Laboratories, Inc., St. Paul, and J. C. Zemlin, former acting sales manager who remains as research director.

★

Warner-Lambert Relocates

Warner-Lambert Pharmaceutical Co., New York, has transferred its central administrative offices from New York to a new building in Morris Plains, N. J., it was announced recently. Alfred E. Driscoll, president, stated that the move is intended to consolidate in more efficient quarters, the executive and administrative staffs of both the company and several of its principal divisions.

★

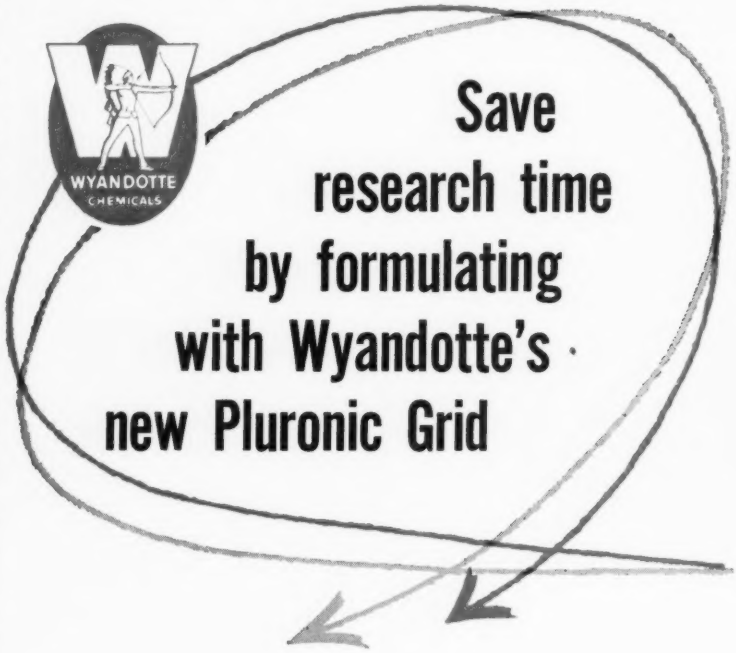
Breck Sales Changes

Two changes in its sales department were announced recently by John H. Breck, Inc., Springfield, Mass. Frank Schaider was appointed sales manager and Lloyd Hayes, assistant sales manager, of the beauty shop division. In his new position, Mr. Schaider will make personnel assignments and direct sales from the New York and Springfield offices. Before joining Breck in 1951, he represented the Conti Castile Soap Co. Mr. Hayes will work from the company's Chicago office.

★

Shea Plans Expansion

Vincent H. Shea, president of Shea Chemical Corp., Jeffersonville, Ind., announced recently the firm's intentions to enter the fluorine chemistry field and also the building, through an affiliate, of a multi-unit plant this fall for the production of hydrofluoric acid and related products. Mr. Shea said that the program to enter the fluorine chemistry field had been under consideration for some time and represents an initial step in the diversification of the company's chemical business. Shea is a producer of elemental phosphorus and phosphorus products, particularly sodium polyphosphates for the detergent industry.



NOW . . . CHOOSE surface-active agents with the best possible balance of properties for your formulation . . . cut down on research time . . . eliminate random evaluation of unrelated surfactants!

The Pluronic* Grid makes it possible. It suggests, *in advance,* characteristics you can get using a Pluronic or combination of Pluronics – Wyandotte's unique series of 100%-active nonionic surface-active agents.

Pluronic surfactants range in molecular weight from 1000 to 11,000; have a controlled hydrophilic-hydrophobic balance. By varying their molecular weights and hydrophilic-hydrophobic ratio in small, controlled increments, an over-all balance of desirable properties is provided: controlled sudsing, a range of surface-active properties, stability, low hygroscopicity, dedusting properties, low order of toxicity . . . properties which can be plotted as trends across the Grid.

Thus, the formulator can select, from the Grid, the Pluronics having the best balance of properties for his formulation.

However, only a thorough laboratory evaluation will give the full scope of what Pluronics can do for you.

Get your copy of the Pluronic Grid, samples, and technical data on Pluronics. Write us today on your company letterhead. *Wyandotte Chemicals Corp., Dept. SCS-9, Wyandotte, Mich. Offices in principal cities.* *REG. U.S. PAT. OFF.

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Refined Names Two

Refined Products Corp., Lyndhurst, N. J., recently announced the appointment of Neiko

Neiko I. Vassileff

I. Vassileff, president of Chemical Sales Co., Cleveland, as Refined's industrial division representative for the northern Ohio area. Mr. Vassileff was engaged in research for B. F. Goodrich Chemical Co., Cleveland, before forming his own company. He received degrees in chemistry and chemical engineering from Vienna Polytechnieum, Austria, and Federal Institute of Technology and University of Geneva, Switzerland. He also holds a degree in business and finance from the University of Bern in Zurich Switzerland.

Harold A. Sweet, Jr., who was appointed last month to succeed his late father as director of the industrial division of Refined, as was reported in the August issue of *Soap and Chemical Specialties,* served previously for nine years in technical service and sales for the Antara Division of General Aniline & Film Corp., New York. He also had been employed earlier by Bell Telephone Laboratories, New York, in its chemical department, and W.-B. Chemical Co., Mount Vernon, N. Y., where he was engaged in product development and production. He is a graduate of the University of New Hampshire where he received a B.S. degree, majoring in chemical engineering, and did graduate work at Polytechnic Institute of Brooklyn.

Bush Joins Penick

B. T. Bush, Jr. has joined S. B. Penick & Co., New York, as special sales representative for aro-

B. T. Bush, Jr.

matic chemicals and essential oils, it was announced recently. He was formerly associated with the aromatics division of Dow Chemical Co., Midland, Mich., in Jersey City, N. J. and Midland. A 1940 graduate of Hamilton College, with a B.S. degree, Mr. Bush served with Bush Aromatics, Inc., New York, for five years in a sales capacity. He joined Dow in 1950 when it acquired the Bush franchise. He is the son of B. T. Bush, now retired, and living in Florida and one of the pioneers in the establishment of the American aromatic chemical industry.

—★—

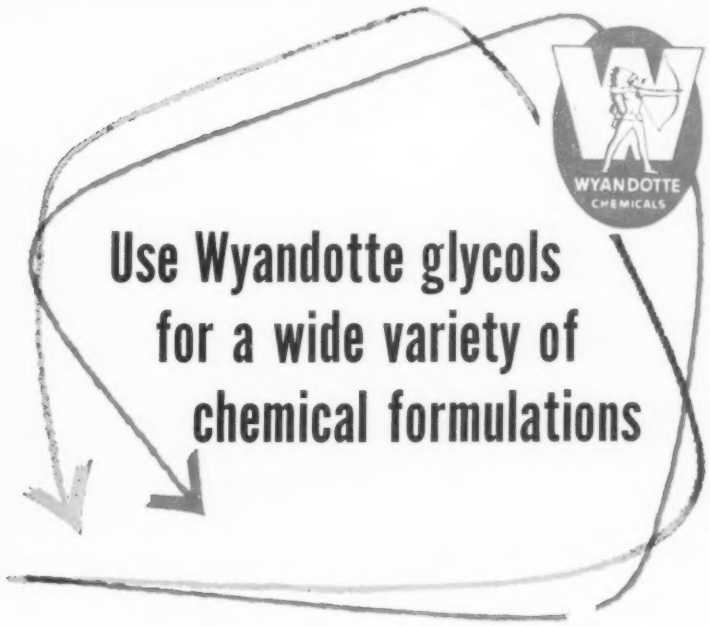
d'Aigremont Returns

Jacques d' Aigremont, president of Roure-Dupont, Inc., New York, returned last month from a two-month visit abroad, it was recently announced. Mr. Aigremont brought back from France samples of new crops of Rose de Mai, Jasmin Lavender and other natural oils.

As the Reader Sees It

(*From Page 33*)

To guard further against this sort of thing we usually write the name of the individual and his company on the face of the proof of the engraving which is pasted on a make-up page. Our system failed us this time. Cuts with correct identification appear on Page 33. Ed.



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by Raymond

The uniformity of any rinse is dependent on the uniformity of the base. PENDIT CA is a creme rinse base manufactured primarily for use in creme rinses. A paste based upon a cationic quaternary ammonium compound, PENDIT CA is batch-tested to virtually eliminate consistency problems. A very light colored hair conditioning agent that remarkably improves the combability and manageability of the hair, it also has powerful germicidal and deodorant properties.

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Two Stepan Appointments

The appointments of D. H. Francis as director of engineering and member of the executive committee, and William O. Ranky as director of laboratories, were announced recently by Stepan Chemical Co., Chicago. Mr. Francis, who holds a degree in chemical engineering from the University of Toronto, previously had served with E. I. du Pont de Nemours, Inc., Wilmington, Del., before joining Stepan in 1953. He was appointed chief project engineer in 1955. Mr. Ranky, a graduate of the Budapest Institute of Technology with a degree in chemical engineering joined Stepan in 1951 as chief chemist. He was named research group leader for Stepan in 1955.

D. H. Francis

W. O. Ranky

P&G Expands in Food

Plans for Procter & Gamble Co., Cincinnati, to enter the prepared baking mix field, were announced last month by Howard J. Morgens, executive vice-president. According to Mr. Morgens, the company already has signed contracts for the purchase of that part of the business of Nebraska Consolidated Mills, Omaha, which manufactures and markets a variety of prepared mixes for cakes and other baked foods under the Duncan Hines name. He also stated that P&G is planning to acquire, through a transfer of stock, Hines-Park Foods, Inc., and the Duncan Hines Institute of Ithaca, N. Y., which for many years have collaborated with Mr. Hines in his various food and travel services.

Jack Lescoulie, center, of NBC's Dave Garroway TV show, "Today," is greeted by David J. Warner, left, Fleuroma, Inc., New York, president of the CIBS (Cosmetic Industry Buyers and Suppliers Assn.). Mr. Lescoulie, who is also a regular announcer for the Jackie Gleason show, was guest speaker at the CIBS regular monthly meeting, held at Toots Shor's restaurant in New York. Also greeting Mr. Lescoulie is Alfred Mossheim, House of Tre Jur, New York, program chairman of CIBS.

Victor Names Myers

The advancement of Elwood M. Myers to director of advertising of Victor Chemical Works, Chicago, was announced recently by M. R. Stanley, vice-president and director of sales. Mr. Myers joined Victor in 1941 as a member of the company's sales staff in Kansas City, Mo. In 1944 he was appointed advertising manager at the firm's home office in Chicago, a position he had held until his recent assignment. Mr. Myers received his education at Purdue University and the University of Illinois. He is a member of the National Industrial Advertisers Association.

Elwood M. Myers

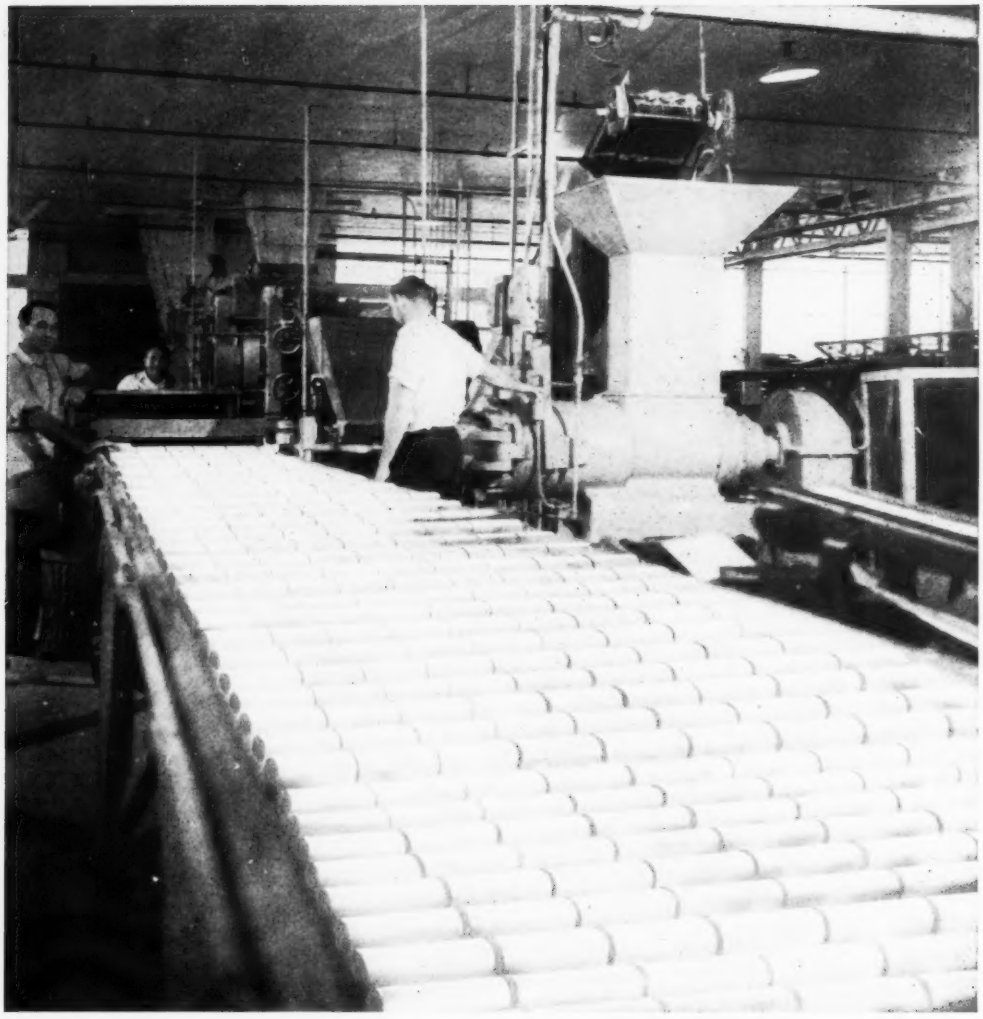
★

Solvay Names Two

Two appointments in the technical service department of Solvay Process Division, Allied Chemical & Dye Corp., New York, were announced last month by J. H. Elleman, director of coordination. James F. Adams, Jr. was appointed general manager of technical service while Norman C. Weil became technical advisor.

A graduate of Syracuse University, Mr. Adams joined Solvay in 1939 as a chemical engineer in the company's research department.

Mr. Weil, a graduate of Rensselaer Polytechnic Institute first was employed by Solvay in 1924 as a research chemist. He transferred to technical service in 1929. Both men will continue to make their headquarters at Solvay's research center in Syracuse.



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Perfuming of Toilet Soaps

Quality of fats used, alkalinity, type of package used, discoloration and original odor of fat among the factors to be considered in perfuming soaps.

By Roy Huttleston*
Givaudan-Delawanna, Inc.
New York

IN formulating a new perfume, the perfumer must give thouht to the product for which his creation is to be used. Each cosmetic preparation has its own special problems, but the perfumer, in creating a perfume for soap, must consider all of these problems as well as an entire new group.

Let us first consider the basic materials going into a cake of soap. The soap stock contains a varying percentage of coconut oil and the balance of the fat content may contain tallow, lard, palm oil, olive oil, vegetable oils and marine oils. Some of these oils or fats are edible, and it is understandable that any which are good enough for this purpose will be so used. It is also quite understandable that the balance which is left for use in soap may not be in the best condition. Even after their saponification with alkali, the original odor will come through in some cases, and thereby have a residual effect on the scent of the finished bar soap.

Before the marine oils can be used for soap, it is necessary that they be hydrogenated. This process of hydrogenation reduces the odor level of the fats by saturation of the unsaturated compounds which are responsible for most of the unpleasant odors. When large concentrations of these oils are used in soaps, they present a definite odor problem. In general, these residual odors are mild, but nevertheless they must be considered by the perfumer in creating a pleasant, acceptable perfume for soap.

It is possible that fats and oils in the soap industry can be further purified. However, this is not economical. Therefore, knowledge of the materials which help to preserve the perfume and prevent the rancidity of the soap stock is very important.

Another problem is found in cold process soap. Made from coconut oil and sodium hydroxide, perfume is added in the crutcher and must be so formulated that it will withstand the strong alkali and the heat during saponification. The fragrance must blend well with any residual odors of the coconut oil and be both pleasant and acceptable when used by the consumer perhaps months later.

The soap perfumer must be concerned with the lasting quality of his perfume. Most cosmetics are tightly sealed in jars or bottles which insures little loss of scent until the package is opened. A cake of soap, however, may be in a warehouse or store for months before it is purchased by the consumer. It is wrapped in paper which may have a tendency to absorb the perfume; is subjected to oxidation; and after all this, is expected to have a strong, clean, pleasant scent when placed on the washstand.

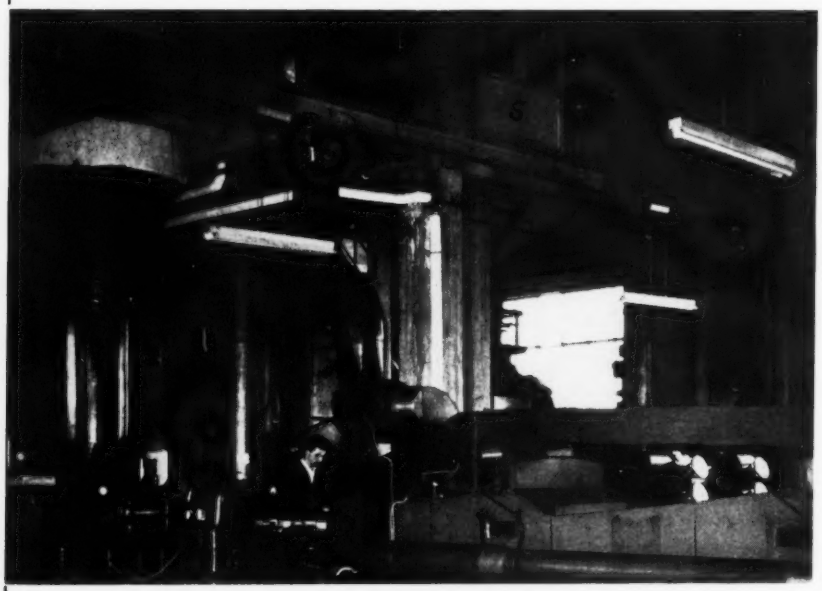
As many of the leading soaps are white, the ingredients of the perfume to be used in them must be carefully chosen so that no discoloration will develop after months of storage, or by sunlight, if a cake is unwrapped and placed where it can be reached by the ultra-violet rays of the sun. This is rather important since cakes which are in any way discolored will be rejected by the consumer.

The danger of discoloration from perfume ingredients is increased by the alkalinity of the toilet soaps and soap shampoos. Traces of free alkali may saponify or decompose some of the less stable perfume ingredients and dark colored products may be formed.

The aldehydes, a class of compounds which include some of the most valuable perfume materials, are perhaps the greatest trouble makers in alkaline products. These materials may be subjected to oxidation and may undergo various condensing and polymerizing reactions in the presence of some of the soap components. The result may be a loss of odor, discoloration or change in fragrance. Those aldehydes which have one or two free hydrogen atoms tend to undergo the aldol condensation in the presence of

*Reprinted from the July-August issue of the *Givaudanian*, house magazine of Givaudan-Delawanna, Inc., 330 W. 42nd Street, New York 36, N. Y.

Continuous Soap Plants



Photograph of a MAZZONI soap plant automatically producing one ton of household or toilet soap per hour. "S" is the silo for the storage of the dried soap rods. From the silo the rods are then passed through a line of finishing machinery for milled soap cakes.

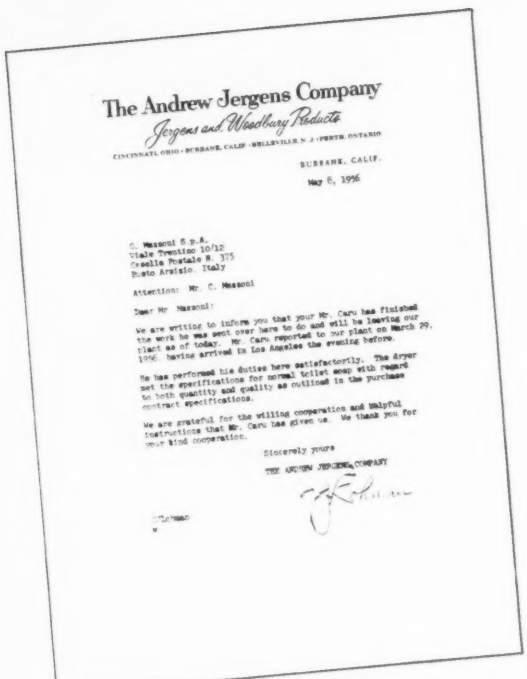
• • •

★ The Vacuum Process, over all other old and new cooling methods, enables you to make use of the water at the temperature available at any factory as it is possible to cool the soap at such a temperature because of the vacuum and the peculiar devices provided — without resorting to expensive cooling equipment—so that its consistency is satisfactory no matter what the cooling water temperature is.

★ Our manufacturing range also includes: plants for continuously sulphonating and spray-drying synthetic detergents in the form of hollow beads—continuous fat splitting and fatty acid saponification plants — continuous glycerine recovery and refining plants.

Advantages of the MAZZONI Process:

★ Small plant space; only one operator needed.
★ Saves 10% in steam, 50% labor, 40% electric power.
★ Operates at low temperature, avoiding deterioration of soap.
★ Vacuum process gives better toilet soaps. Deodorizing effect reduces perfume needs. Smoother, grit-free cakes which wash off evenly. Improved lathering.
★ Transparent toilet and laundry soaps without addition of glycerine, alcohol, sugar, and any other additives.
★ Complete installations (mixers, mills, plodders, cutters and stampers) for milled toilet soap and soap flakes.
★ Since 1945 more than 130 plants have been installed in different countries of the world.
★ Laundry soaps, pure from 62% fatty acids upwards or filled from 35 to 62% fatty acids, ready for pressing and immediate packing without slabbing, cutting, etc. Automatic perfuming device included.
★ Suitable for adaptation in any soap factory, — a compact, low-cost vacuum process, continuous from neat soap to pressing and wrapping.
★ Soaps showing a beta phase content from a minimum of 75 percent to a maximum of 100 percent. Analyzed in the laboratories of Procter & Gamble Company, Cincinnati. Analysis is given with their permission.
★ Plants for outputs of one-quarter-ton, half-ton, one ton, two tons, three tons or higher per hour.



The Andrew Jergens Company
Jergens and Woodbury Products
CINCINNATI, OHIO · BURBANK, CALIF. · BELLEVILLE, N. J. · PERTH, ONTARIO

BURBANK, CALIF.
May 8, 1956

G. Mazzoni S.p.A.
Viale Trentino 10/12
Casella Postale N. 375
Busto Arsizio, Italy

Attention: Mr. G. Mazzoni

Dear Mr. Mazzoni:

We are writing to inform you that your Mr. Caru has finished the work he was sent over here to do and will be leaving our plant as of today. Mr. Caru reported to our plant on March 29, 1956 having arrived in Los Angeles the evening before.

He has performed his duties here satisfactorily. The dryer met the specifications for normal toilet soap with regard to both quantity and quality as outlined in the purchase contract specifications.

We are grateful for the willing cooperation and helpful instructions that Mr. Caru has given us. We thank you for your kind cooperation.

Sincerely yours
THE ANDREW JERGENS COMPANY

For further detailed information, write to

G. MAZZONI, S. p. A.

Busto Arsizio, (Varese) Italy

Cable address: Cosmazzoni, Busto Arsizio

alkali. In this reaction, one molecule of the aldehyde adds at the alpha carbon atom to the carbonyl group of another molecule forming a compound which has both an alcohol and an aldehyde group. This compound can then react again with a third molecule of aldehyde in the same way. Under favorable conditions, the reaction may continue until dark colored resins are produced.

Cinnamic aldehyde should be avoided in perfume compounds for use in white soaps because it tends to cause discoloration. The reactivity of the alpha hydrogen of the cinnamic aldehyde seems to be responsible for this sensitivity to alkali because when this hydrogen is replaced by the amyl radical, the resulting compound is alkali-stable.

Alpha amyl cinnamic aldehyde has an intense jasmin odor and can be used to perfume white soaps without danger of discoloration.

The close relationship between molecular structure and the tendency to discolor is well illustrated by the two terpene aldehydes, citral and citronellal. They are alike in structure except that citral has a double bond in the alpha-beta position relative to the aldehyde group whereas citronellal does not. Citral turns yellow merely on exposure to light and air, and in soaps it produces a yellow-brown color and a resin-like odor. Citronellal, on the other hand, does not cause discoloration in soap.

The molecule of vanillin contains an aldehyde group as well as a phenolic group and is consequently very reactive. Vanillin is sensitive to light and darkens more rapidly in the presence of alkali. It is also sensitive to traces of iron. A white soap base perfumed only with vanillin will quickly turn brown, although the odor of vanillin lasts a long time. It has been suggested that the dark color may result from a condensation similar to that by which phenol-formaldehyde resins are formed. Vanillin may be the source of the brownish discoloration which appears in white soaps containing benzoin, balsam Peru, and balsam Tolu, as it is known to be a constituent of these resins.

Ethyl vanillin, a compound in which the methoxyl group of vanillin is replaced by ethoxyl, will also darken in alkaline media but as it has a more powerful odor than vanillin, it can be used in smaller quantities.

Jasmin and neroli perfume compounds are likely to cause strong discoloration in soaps unless they are compounded specifically for this purpose. The discoloration is due to the presence of indole and methyl anthranilate — two chemicals which play important roles in the odor of jasmin and orange blossom fragrances. Both of these compounds are amines, and they darken when exposed to light. In an alkaline medium and under the influence of light and air, the combination of indole with vanillin or heliotropin will give rise to a brick red color. The same reaction is given by skatol, the methyl derivative of indole, and by civet, which contains skatol. To avoid discoloration, indole should be omitted from synthetic neroli and jasmin oils which are intended for use in white soaps.

Methyl anthranilate, which contains a primary amino group, condenses with aldehydes and ketones in the presence of alkali to yield the products known as Schiff's bases. The methyl anthranilate condensation products, in some cases, have been used to stabilize the odor of aldehydes in soaps but the intense color greatly restricts their usefulness.

No matter for what purposes a perfume is intended, almost every formula will contain a percentage of musk. In soap this will usually be one of the nitro musks, and of this group the one enjoying the greatest popularity is musk xylene, invented in 1888 by Albert Baur. The combined sales of all the other musks have never equaled it in tonnage. The reason is that musk xylene imparts a lasting sweet freshness to the soap, and causes the least discoloration of any in this first nitro family.

Musk ambrette, so named because of its odor resemblance to ambrette seed, was developed in 1891. Its strong musky odor makes it very useful in floral compositions. Strong and lasting, its greater usefulness is curtailed only by the fact that it causes discoloration, so caution must be used if the compound is intended for white soap.

Musk ketone, invented in 1894, has the greatest similarity to natural musk of the nitro-group. Especially useful in floral extracts, it is also used in floral perfumes for soaps. As with musk ambrette, it must be used with care if the color of the soap is important.

Next to join the nitro-group was Moskene*, developed by the Givaudan chemists in 1932. It won immediate popularity, especially with the soap perfumers. Its odor value, in between musk ambrette and musk ketone in tonality, together with limited discoloration, contributed to its acceptance.

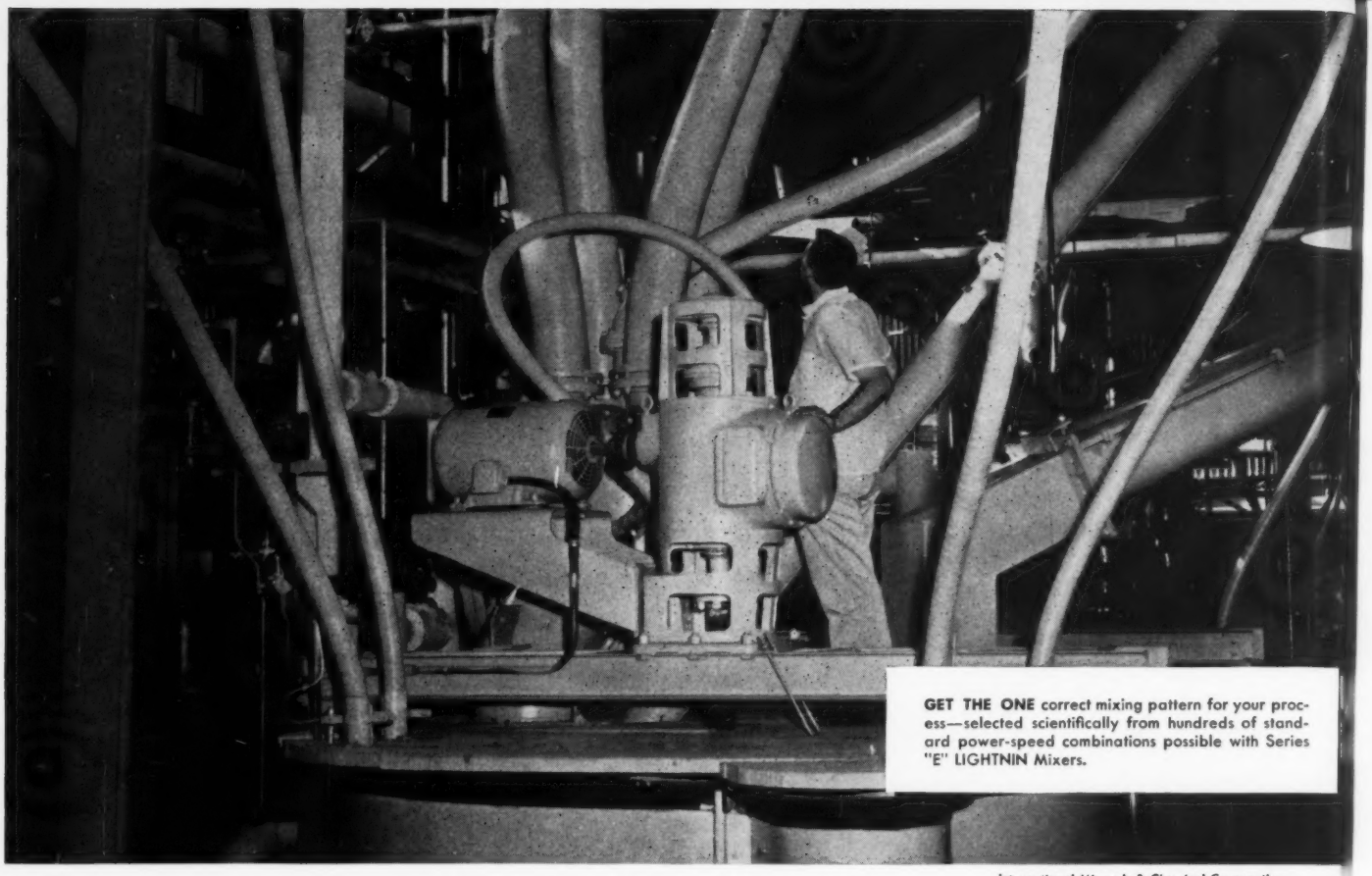
Musk Tibetene* joined the family in 1937. This Givaudan musk is similar to but stronger in odor than musk ketone and shows less discoloration in soap.

Benzyl salicylate has the ability to minimize the reactions of alkali on the nitro musks and for this reason is often used as a solvent for the musks.

The next step in musk history was the recent development by Givaudan of a new polycyclic musk. In odor it is nearer to the macrocyclic than to the nitro musks. An important characteristic is its extreme stability to air, light, heat, and even to boiling in dilute alkali. Our experiments in soap show no discoloration and very little loss of odor after months of normal storage.

Some aldehydes, prone to decomposing, have the tendency to promote rancidity and should be avoided in compounding perfumes

*Trademark



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International Minerals & Chemical Corporation

How to **outsmart** *fluid mixing costs*

When you plan to mix fluids, cast a sharp eye at the *long-term cost factor.* It can make the difference between success and failure of a process.

Choose a mixer that's engineered to keep your mixing costs in line—*for the next 10 years or more.*

Here's the cost side of the LIGHTNIN Mixer story. It's your ticket to mixing that does what you want it to do, at lowest possible long-term outlay:

1. *Save when you buy*—When you specify LIGHTNINS, you eliminate guesswork and false starts. From the start, you're covered with a performance guarantee, based on scientific mixer selection and scale-up. You get the mixing you want, without paying for unwanted horsepower. And you save on installation, because LIGHTNINS arrive fully assembled, factory-aligned, ready to mount and run, without extra construction.

2. *Save while you mix*—You minimize shutdowns when you mix with LIGHTNINS. Hundreds of LIGHTNINS have been in service 20 years and longer. If you ever need to, you can get standard impellers, shafts, replacement parts *from factory stock,* shipped on 24 hours' notice.

3. *Save if you ever convert*—Comes time for a process change, and you can in all probability adapt your LIGHTNINS to handle new mixing requirements. Impellers, shafts, tank mountings—yes, even speeds—are quickly interchangeable, using standard stock components. You can, for example, switch the same standard Series "E" LIGHTNIN from open-tank to closed-tank service; from top-entering to bottom-entering mounting; and through a full range of standard speeds from 16.5 to 420 RPM. It's the smart way to beat mixer obsolescence.

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MIXCO fluid mixing specialists

Left: **REALIZE** lowest possible upkeep in big-tank mixing, with LIGHTNIN Side Entering Mixers. *Right:* **MAKE ANY OPEN TANK** a mixing vessel, with a LIGHTNIN Portable Mixer. Thirty models, many modifications.

FOR LATEST MIXING INFORMATION and full description of LIGHTNIN Mixers, send for these helpful bulletins:

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- ☐ B-108 Portable: ⅛ to 3 HP
- ☐ B-104 Side entering: 1 to 25 HP
- ☐ B-112 Laboratory and small-batch production types
- ☐ B-109 Condensed catalog showing all types
- ☐ B-111 Quick-change rotary mechanical seals for pressure and vacuum mixing
- ☐ B-107 Data sheet for figuring mixer requirements

Check, clip, and mail with your name, title, company address to:

MIXING EQUIPMENT Co., Inc. 167-j Mt. Read Blvd., Rochester 11, N. Y.

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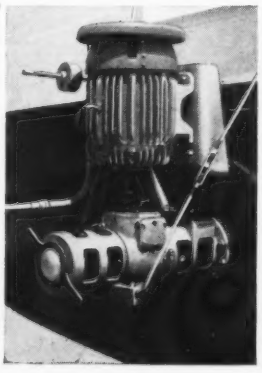


designed for use in soap.

The increasing tendency of the public to refuse products with an unpleasant odor has caused a demand for more and more perfume materials. Soaps, one of the largest users of aromatic products, require many times the quantity used years ago. These facts, coupled with the higher prices of essential oils, have made enormous demands on the producers of aromatic chemicals and, at the same time, increased the problems of the soap perfumer.

Essential oils are, in themselves, compounds. Forty years ago, the average soap perfume might have been composed of ten to fifteen essential oils with about ten percent aromatic chemicals. Broken down into individual ingredients, this formula could contain four to five hundred chemicals. Such a formula would be impossible today for two reasons. First, the essential oils would not be available; and second, the cost would be entirely prohibitive.

A soap perfume prepared today will contain up to eighty percent or more of aromatic chemicals, rounded out with essential oils. Aromatic chemicals could be described as having single notes instead of the blend of notes found in the essential oils. To illustrate, rhodinol, citronellol, geraniol, phenyl ethyl alcohol, all rose notes, compose the major part of a rose perfume. Perfumers, in creating a perfume for soap, will utilize these notes in blending a rose fragrance, varying them to meet the cost requirements. This idea may be repeated in making other compounds simulating the odor of lilac, lily-of-the-valley, sweet pea, hyacinth and violet. By using those and other compounds together with aromatic chemicals and available essential oils, the perfumer can make many smooth, interesting blends, and keep the finished perfume within the cost limitations necessary to meet competition.

With hundreds of aromatic chemicals on the market, and new products being made available at all times, the perfumer has an unlimited number of materials available for his new creations. Of course, these new materials must be thoroughly tested before they are used in soap fragrances.

To test these new chemicals as well as all our experimental compounds intended for use in soap, they are milled into a neutral soap and stamped into bars. These bars are checked at regular intervals for odor and discoloration over a period of one year.

In order to obtain approximate results without a long period of waiting, an oven test has been correlated to show the results of almost a year of normal ageing in one week. A machine was also developed to show the result of many days in the sun in a few hours. A study of the results of these tests makes it possible for the soap perfumer to make improvements on his compounds before submitting them, and while the customer is still interested in the problem. New chemicals can be recommended with the knowledge that they will produce the desired results when used for the purpose for which they were manufactured.

★

Revised "G-4" Bibliography

Sindar Corp., 330 West 42nd Street, New York 36, N. Y., recently announced publication of a bulletin containing a complete, revised bibliography of the literature on "G-4" (Dichlorophene). The bibliography, technical bulletin D-2, contains abstracts of some 109 scientific trade articles, as well as abstracts of 12 patents both foreign and domestic.

The bulletin also has been indexed so that any abstract on a given subject can be easily located. The index has been divided into seven major categories including: biological properties, test methods, toxicological properties and uses, compatibility, patents and physical and chemical properties. These categories are further subdivided to give the reader easy access to any particular subject of interest.

New Reducer Booklet

A new bulletin describing its horizontal (cylinder and nut type) crusher, was announced recently by Sprout-Waldron & Co., Muncy, Pa. The bulletin gives basic information, illustrations, specifications and construction details of the crusher which is designed for crushing many types of products to finished size. A two-stage machine, it has a pre-breaker and one for final fine reduction. It is effective in reducing lumps in a general range of four to five inch ring size and with friable materials of six to eight inches. The crusher utilizes a modern drive arrangement and has a low power requirement. It has simple adjustments and requires minimum maintenance. Standard construction is cast iron but the unit is also available in steel or stainless steel for special applications. The bulletin is available upon request.

★

Dispersant Data

A seven-page bulletin describing the use of "Polyfon" has been recently published by the polychemicals division, West Virginia Pulp and Paper Co., Charleston A, S.C. "Polyfon" is sodium lignosulfate, a moderately active dispersant for use in wettable insecticide powders.

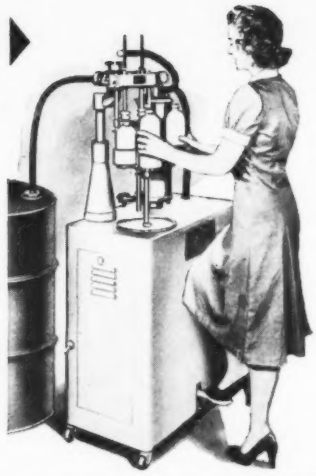
It is made in five grades varying in degree of sulfonation. Three of the grades, "Polyfon H", 'Polyfon T", and "Polyfon F", are now being used as dispersants for wettable powders. The grade selected for any given formulation is dependent on the carrier, the toxicant, and also the equipment and process used in preparing the powders.

★

New El Dorado Brochure

El Dorado Division of Foremost Food and Chemical Co., Oakland, Calif., has recently announced publication of a new brochure listing the details, specifications and characteristics of their coconut oil fatty acids, methyl esters and specialty products. The brochure may be obtained from the company at P.O. Box 599, Oakland 4, Calif.

MODEL B-2 VACUUM FILLER provides efficient continuous production, filling two containers at a time. Handles a wide variety of liquids and semi-liquids. Has automatic product supply; vacuum is adjustable and flow regulated for accurate, clean filling. For containers up to 4⅛" dia. round or rectangular. Efficient. Send for Bulletin B-2.



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——whether hand-filling, siphon, semi-automatic or fully automatic filling, there is a U. S. Filler, or an adaptation thereof, to spark your production.

Here the most unusual liquid filling problems are solved regularly by engineers with a background of generations of specialization. If your product has outgrown your present equipment, a U. S. machine engineered to your specific needs, will simplify your operations and increase your profits.

When writing for recommendations, please specify products, size and type of container and desired filling rate in terms of containers per minute, hour or day. Individual Bulletins on all machines mailed upon request; please specify whether for hand-filling, siphon, semi or automatic filling.

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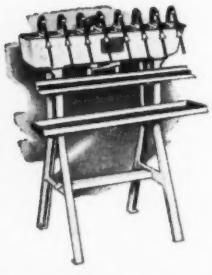
STRAIGHTLINE VACUUM FILLER for liquids and semi-liquids. Most automatic one-operator multiple filler. Available with or without discharge conveyor. Contact parts of stainless steel, or in plastics on special order. Filling proceeds automatically while empties are loaded. Easy operating lever activates container feed; otherwise operation is completely automatic. Adjustable for AGST to gallon size finishes. A dependable machine where filling cost is a factor. Send for the new Bulletin B-49.



THE U. S. SIPHON FILLER is a highly efficient machine. Adjustable for all types of containers. Stainless steel filling tubes and acid-resistant glass lined tank. Handles all types liquids, including foamy products and products that do not permit agitation. Fills without overflow or spillage. Send for the Siphon Bulletin.

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New and Improved Kinetic Ball Mill

A NEW development in ball mills, designed for extremely fine particle size reduction and rapid grinding and dispersion, recently has been introduced in this country by Kinetic Dispersion Corp., Buffalo, N. Y., under license from Steel-Shaw Mills of England.

The mills will utilize a principle that is new in production — the application of higher centrifugal force to ball and pebble mill grinding by planetary motion of the ball mill pots. In the Steel-Shaw Mills four individual pots are arranged on the periphery of a circle that revolves around a central drive while each pot also rotates simultaneously on its own driving spindle. The result is a greatly multiplied mixing action and the subjection of a greater amount of product to the grinding action of the balls or pebbles. Therefore, the operator has the choice of either obtaining a standard grind in less time or reducing particle size to greater fineness with improved dispersion.

The mills are made in both a production and laboratory model. In the production model the individual pot capacity is six gallons, providing an average charge of three gallons for each of the four pots, totaling 12 gallons. However, since the mill can reduce ordinary production time, the daily or weekly capacity is comparable to a conventional mill of greater size. The pots are interchangeable, and change over is rapid, enabling the mill to produce continuously throughout the work week. The laboratory model also provides four pots operating at the same time. Each pot takes a grinding charge of three pints. The pots also may be run simultaneously on different materials and likewise the change-over is rapid to enable a great number of experiments to be completed in a short time. The results of the laboratory mill in production may be transferred proportionally to the larger scale.

The mills work effectively with all types of coating that normally require ball mill grinds. They will grind to semi-paste consistencies and will grind dry materials. Normal maintenance requires only lubrication attention. Since the pots are removable the mill does not need cleaning after a production run. Kinetic plans to begin manufacture of the mills in the near future. They are currently on display for inspection and testing purposes in the firm's Buffalo laboratories.

★

Bezard Visits Europe

Louis Bezard, president of de Laire Inc., New York, perfuming materials firm, returned last month from a combination business-pleasure trip to Europe. Accompanied by his wife, Mr. Bezard conferred with directors and staff of the parent company in Issy les Moulineaux, France.

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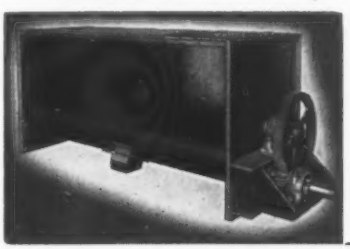

The Marion Mixer is engineered for precision mixing and turns out TOP QUALITY mixed products for chemical manufacturers everywhere. The Marion Mixer is recommended for mixing the Lightest or Heaviest Materials. Its simple, efficient design is rugged enough to handle any volume of mixing large or small . . . and at the same time, it constantly safe-guards your formula mixes from loss of uniformity. Laboratory tests have proven that even trace materials can be blended into the most complicated industrial chemical formulas, and pass individual analysis tests for the most even batch distribution possible.

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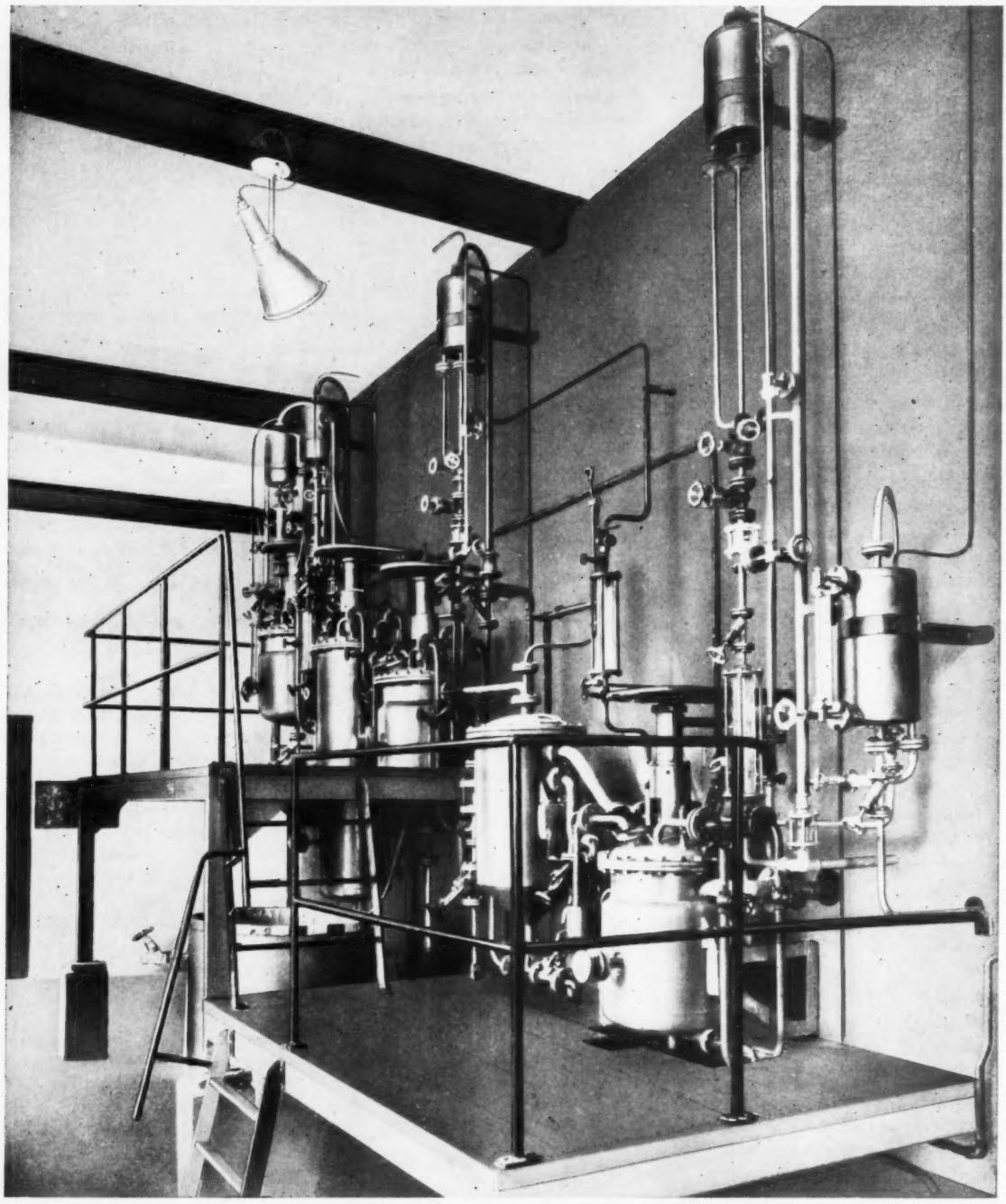

100 Kgs. per hour "SULFAN" plant in operation at Ets GEOSYL Saint-Denis (France)

"SULFAN" CONTINUOUS SULFONATION PLANT — "Ballestra" Patent

Basic operating principles

Pre-dilution of reacting matters into the reaction product and consequently:

—No more local overheating!
—No more di-sulfonated matter!
—No more product discoloration!
—No more temperature troubles as with batch plants!
—No more ice dilution of sulfonated matter: water is perfectly O.K.!
—No more expensive refrigerating units!

Manufacturing characteristics

—Cooling by means of tap water (Max. temperature 20° C.)
—Constant pH values in each step: each vessel is manufactured in the more resistant material to suit the pH value and consequently: no more corrosion.
—Perfect and simple proportioning of the reacting matters with no moving parts for doing it.
—Perfectly constant reaction times in each step and consequently perfectly homogeneous products.
—Totally automatic operation, controlled from one main board.
—Possibility of getting slurries with high active matter, very low mineral salts content and practically no unsulfonated matter.
—A very wide range of sulfonable matters can be employed as raw material.

Economic advantages

Longer lasting plant: lower mortgage percentages.
—A sulfan plant requires about 1/5 of the space required by a batch plant of the same capacity: substantial money savings on space and building costs.
—Very low operating costs: one man is sufficient to inspect the running plant at regular intervals.
—Lower current consumption because no refrigerating unit is needed and less power is required due to the smaller dimensions of the vessels.
—A high degree of sulfonation prevents alkane waste in drying the slurry.

U. S. Sales Representatives:
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NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine, Mac Nair-Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be $1.00 per copy.

No. 2,756,214. Mechanical Dishwashing Composition and Method of Using Same, patented by Kurt Albrecht, Pleasant Hills, Pa., assignor to Calgon, Inc., Pittsburgh, Pa. An improved dishwashing composition is disclosed consisting essentially of a mixture of from about 80 per cent by weight to about 20 per cent by weight of sodium tripolyphosphate and from about 20 per cent by weight to about 80 per cent by weight of hydrated chlorinated trisodium phosphate.

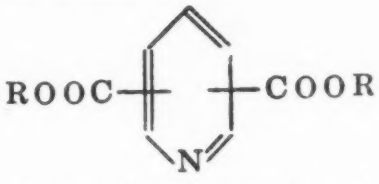
No. 2,744,049. Stabilized Dental Creams, patented by Gerhard Martin Salzmann, Franklin Lakes, N. J. and Robert Joseph Schiraldi, New York, N. Y., assignors to Colgate-Palmolive Co., New York. A dental cream is described comprising a water-insoluble calcium phosphate polishing agent, an organic detergent, water and a humectant, and having incorporated therein at least about ½% by weight of a partial glyceryl ester of a higher fatty acid as an agent to stabilize the cream against hardening in tubes, separation of liquids from solids and formation of graininess.

No. 2,744,124. Process for Preparing Fatty Acid Partial Esters of Polyhydric Alcohols, patented by William Godfrey Alsop, Summit, N. J., assignor to Colgate-Palmolive Co., New York. The patent teaches a continuous process of producing polyhydric alcohol esters of fatty acids having a high monoester content which comprises continuously passing a mixture of a polyester of a polyhydric alcohol and a polyhydric alcohol through a reaction zone maintained at a temperature from about 200° to about 350° C. while subjecting the mixture while flowing through said reaction zone to efficient agitation in order to promote intimate admixture of the reactants, regulating the rate of flow of said reaction mixture through said reaction zone so as to provide a holdup time in said reaction zone not exceeding about 7 minutes but sufficient to reach substantial equilibrium, continuously withdrawing the reaction mixture from said reaction zone and immediately cooling said reaction mixture, thereby obtaining a reaction product rich in fatty acid monoesters of a polyhydric alcohol.

No. 2,756,178. Residual Lanolin Hair Shampoo, patented by Jack R. Verblen, Chicago. A latherable and residual lanolin hair shampoo is described having a large lanolin content consisting of a lathering agent, a monoisopropanolamine amide of a high molecular weight fatty acid from 12 to 18 carbon atoms and a substantial amount of lanolin, the amount of lanolin consisting of at least 15% by weight of the shampoo, said amide acting as a blocking agent in preventing the lanolin from destroying the lathering character of the lathering agent and said amide being substantially 70% of the amount of the lanolin.

No. 2,753,363. Method of Making Soap, patented by Baruch Winer, Brooklyn, N. Y. The patent discloses a method of making a soap containing not more than about 15% by weight moisture which comprises reacting a fatty material composed of free fatty acids and a maximum of about 15% glycerides with a dry alkali metal carbonate in an amount sufficient to saponify 30%-80% by weight of the fatty acid content of said material at a temperature between about 60 and about 175° C., and then completing saponification of said material with an aqueous alkali metal hydroxide solution containing from 10% to about 50% by weight of said hydroxide.

No. 2,757,120. Compositions Containing Esters of Pyridine Dicarboxylic Acids as Insect Repellents and Method of Using, patented by Nelson J. Leonard, Urbana, Ill., assignor to Phillips Petroleum Co. A method for repelling flies from a surface frequented by flies is covered which comprises applying to said surface dissolved in an organic solvent selected from the group consisting of acetone and a hydrocarbon which boils above atmospheric temperature in a concentration sufficient to deposit from 1 to 10 grams per 100 square feet of surface of a compound having the characteristic structure



wherein each R is the same alkyl radical selected from the group consisting of ethyl, n-propyl and n-butyl.

No. 2,750,252. Method of Applying Lindane, patented by William N. Sullivan, Washington, D. C., and Frank H. Babers, Silver Spring, Md.; dedicated to the free use of the People in the territory of the United States. The patent teaches a method of reducing insect life in a ventilated room suitable for occupancy by human beings, employing the slightly volatile pesticide, lindane, and without heating the latter, comprising propelling a stream of air at room temperature over a mass of crystals of lindane ranging from about 50 to 100 microns in diameter confined and supported in the path of the air stream, the crystals being spaced sufficiently apart to permit effective sublimation and to permit the stream of air to pass uniformly and freely over the crystals in said mass over the entire area thereof presented to the stream, the air being delivered through the mass at a rate of at least about 100 cubic feet per minute, the rate being correlated with the size of the room to obtain a rapid approach to saturation of the air with lindane vapor, which is about 0.00016 mg. per liter of air at 20° C.

No. 2,757,094. Liquid Cleaner and Polisher and Method of Compounding the Same, patented by Charles Guss, Omaha, Nebr. A nontoxic aqueous emulsified cleaning and polishing product is patented having the appearance and consistency of milk and adaptable for the polishing of non-adsorbent hard shiny surfaces, comprising the following ingredients and their respective proportions:

0.61% by weight dimethylpolysiloxane (in fluid form);
0.035% by weight glycerol stearate;
0.035% by weight polyoxyethylene stearate;
0.200% by weight polyethylene glycol tertdodecylthioether;
99.120% by weight water.

No. 2,753,364. Process of Preparing Lithium Soaps, patented by Charles J. Boner, Kansas City, Mo., and Lawrence W. Breed, Kansas City, Kans., assignors to Battenfeld Grease & Oil Corp., Kansas City, Mo. A method of producing a lithium soap is described which comprises the steps of admixing approximately one mole of lithium carbonate, approximately two moles of a fatty acid, and .001–1.0 mole of ammonia, calculated as NH_3, from an ammonia producing compound selected from the group consisting of inorganic ammonium compounds, aliphatic, alicyclic and aromatic amines and amides, heterocyclic amines and acid nitriles, heating the mixture to obtain a reaction between said acid and the lithium carbonate, and thereupon heating the reaction mass until all of said ammonia is driven off.

No. 2,757,195. Production of Substantially Odorless Alkyl Aryl Sulfonate Detergents, patented by Richard Dale Stayner, Berkeley, Calif., assignor to California Research Corp., San Francisco. Disclosed is a process for producing an alkyl aryl sulfonate detergent by sulfonating an alkyl benzene hydrocarbon having 10 to 18 carbon atoms in the alkyl group with concentrated sulfuric acid, settling the sulfonation reaction product to separate a sulfonic acid layer and an unreacted sulfuric acid layer, neutralizing the sulfonic acid layer and drying the neutral product, the improvement which comprises dispersing from 0.02 to 0.1% by weight of at least one aromatic amine of the group consist-

(*Turn to Page 85*)

Announcing...

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Tall Oil Fatty Acids

Hercules Powder Company announces the availability of Pamak tall oil fatty acids—a major new source of supply for these versatile chemical materials.

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Products and PROCESSES

New Insect Control Idea

Papers presented by Dr. Peter Karlson of the Max Planck Institute, Berlin, and Dr. Carroll M. Williams, Harvard University at the 10th International Congress of Entomology, held last month in Montreal, suggested that man might fight insect pests by aging them prematurely with strong doses of their own body fluids.

Dr. Williams spoke of the "Juvenile Hormone," a growth controlling fluid found in certain silkworm moths. He related how this hormone, taken from the stomach of the adult male moth, could be used to accelerate the life stages of an individual moth until it died. Dr. Karlson added that if we can synthesize the insect hormone and produce it in quantity, it will be another method to control insects.

Dr. Paul F. Russell of North Edgecomb, Me., an authority on malaria control, told the congress that more research is needed in the growing resistance to insecticides of mosquitoes. He predicted that a study of genetics and of insect larvae eventually would disclose the reason for resistance.

—★—

New Dow Polyglycols

Three new polyglycols adaptable as chemical intermediates in the production of surfactants and other chemicals have been introduced by Dow Chemical Co., it was announced recently. The products are polyepichlorohydrin, polystyrene glycol and polybutylene glycol. The new compounds are expected to find uses in detergents, paints, petroleum, plastics and coatings industries.

—★—

New du Pont Nonionic

A new chemical, "Alkanol HCS," said to be an excellent detergent with low foaming properties, was introduced recently by E. I. du Pont de Nemours, Inc., Wilmington, Del. The new detergent is a nonionic surface active agent based on an ethylene oxide condensate of a high molecular weight fatty alcohol. It may be used also as an emulsifying and dispersing agent of general utility and as a retardant and leveling agent in dyeing processes, a fulling assistant in acid media.

—★—

New Dow Booklet

A new booklet, entitled "Dow Sodium Orthosilicate," was issued recently by Dow Chemical Co., Midland, Mich. The eight page booklet discusses laundry and metal cleaning applications of sodium orthosilicate and presents its physical and chemical properties and necessary packaging and safety precautions. The chemical's role in neutralization of acidic materials while maintaining a high degree of alkalinity in laundering, are also discussed. In addition there are sections devoted to electrolytic and spray cleaning in the metal cleaning field, as well as other applications of the chemical.

—★—

New Fritzsche Catalog

Fritzsche Brothers, Inc., 76 Ninth Avenue, New York 11, N. Y., recently announced publication of its new wholesale price list of essential oils, aromatic chemicals and related materials. The catalog is divided into 15 sections covering perfuming materials and flavoring compounds. It is available to wholesale purchasers of these materials.

—★—

New Alcolac Detergent

American Alcolac Corp., Baltimore, recently announced the production of a new type of sodium lauryl sulfate powder. The new product "Sipex", is a dry white powder of 75% active content. Possible applications include use in bubble baths, powdered shampoos, household and institutional cleaners, car washes, dishwashing formulations and other packaged detergents.

It was also announced that a plant unit has been installed to utilize the new production technique. In addition to the economies, the manufacturer claims that the method of processing also permits the one-step production of mixed sulfates and uniform, built detergent compositions.

—★—

Lanolin Derivative

The introduction of "Nimco Ethoxylan," a new water and alcohol soluble, non-ionic lanolin derivative designed for use as an additive in shampoos, shaving creams, and aerosol products which do not require anhydrous materials, has been announced recently by N. I. Malmstrom & Co., Brooklyn, N.Y. Prepared from lanolin, modified to attain a hydrophyllic form, "Nimco Ethoxylan" is available in two grades of 50 and 100 percent active ingredients. The product is a free flowing, viscous fluid, amber in color, bland in odor and has a cloud point below 40 degrees C. Suggested formulations and literature on "Nimco Ethoxylan" are available from the company's products application laboratory.

New Patents

(*From Page* 83)

ing of ortho-phenylenediamine and para-phenylenediamine in the hydrocarbon before the sulfonation reaction is complete.

No. 2,754,242. Process of Combatting Insects Utilizing Phosphinates, patented by Gennady M. Kosolapoff, Auburn, Ala., assignor to Monsanto Chemical Co., St. Louis, Mo. The patent discloses a process of combating insect pests which comprises applying to said pests an alkyl bis (parachlorophenyl) phosphinate wherein the alkyl group contains between 1 and 4 carbon atoms.

No. 2,755,294. Bleaching of Soaps and Soapstocks, patented by Frederick Oliver James, Hoylake, England, and Anthony Humphreys, Douglas, Isle of Man, assignors to Lever Brothers Co., New York. A method of bleaching soap is disclosed comprising continuously feeding a hypochlorite bleaching agent into a stream of molten soap and ensuring rapid and intimate mixing of the bleaching agent with the soap.

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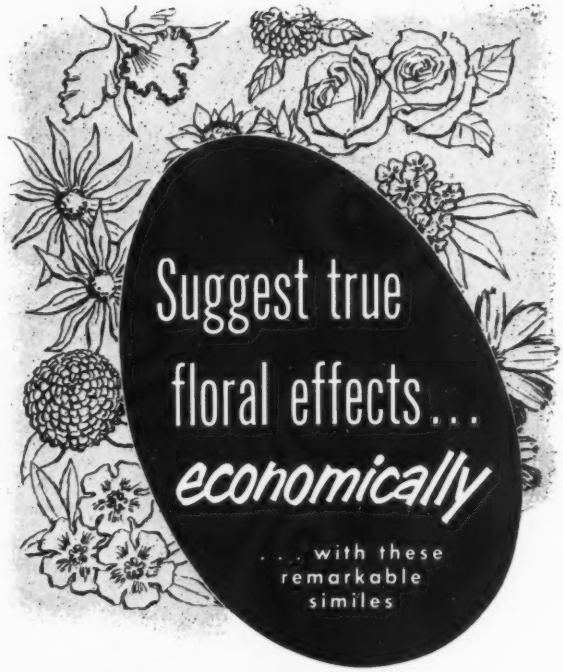

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PRODUCTION Clinic

By E. G. Thomssen, Ph.D.

THE "bugs" that develop in well-made, quality products that are subjected to the rigors of shelf-life can be very discouraging. Consumer dissatisfaction, transmitted and probably magnified by dealers, can lead to recriminations between salesmen and production men. Product or packaging defects occur unexpectedly and sometimes for no readily apparent reason whatsoever. It is serious enough for manufacturers to hear unjustified complaints about their products. But when shortcomings actually exist and the consumer becomes rightfully resentful the situation is downright distressing.

Frequently, instead of complaining directly to the manufacturer of the offending product, giving him the opportunity to remedy the condition, the irate consumer may broadcast her dissatisfaction to other potential or actual users. This is extremely grave and the damage inflicted on the reputation of the manufacturer and his products, as well as the loss in sales, cannot be estimated.

Few, indeed, are the production departments responsible for a large and varied line of products, such as chemical specialties, that have not, at one time or another, gone through the ordeal of discovering serious flaws in one or several items or their packaging.

What are these defects and how are they caused? They may result from adverse physical and/or chemical conditions. Atmospheric variations, such as in temperature, light and humidity, cause physical changes. Chemical spoilage can result from aging, incompatibilities, oxidation, impurities in raw materials, or through bactericidal and fungicidal action. Separation, caking, off color, shrinkage, consistency changes and grittiness may be brought about by physical conditions. Chemical reactions may cause off odor, color variations, liquefaction, cloudiness or "floaters" and failure to perform as indicated. Occasionally the container may become defective or react with the contents to cause spoilage.

Considering some of the specific defects just cited, how do we diagnose their causes and what are some suggested remedies to correct them? We will consider solids, liquids and creams or pastes in that order.

Solids

PRODUCTS sold as solids, which includes powders, are not too prone to develop defects. Difficulties that do arise with them at times involve caking, grittiness, shrinkage, poor distribution of color and ingredients, darkening, fading and bleeding. Loss of perfume or odor is another weakness to which powder products are subject at times. Crumbling and cracking can also occur in compact solids.

Caking of powders usually is due to changes in moisture content. Heat is apt to drive off water, while an increase in moisture may be the direct cause of the lumping of one or several ingredients. In other cases mixtures, consisting of substances that remain granular while dry, react chemically as moisture is taken up from the surrounding atmosphere. Some presumably inert dry ingredients may absorb moisture rapidly. Borax is an example. When caking takes place it is important to determine if moisture is the cause. Finished powder products and their raw materials should be stored carefully, preferably in moisture-proof packages. The use of an anti-caking material, such as tricalcium phosphate, in certain cases, can prevent caking. A small quantity, correctly distributed, can overcome caking.

Dr. E. G. Thomssen

Grittiness, though rare, usually results from breaks in sifting cloths or inadequate grinding in preparing powder products. Some substances also take up water and form hard crystals.

Loss of water is the most common cause of shrinkage.

Compact solids usually are not troublesome and withstand shelf life very well. Occasionally they may crumble or crack, for which moisture content may be the cause, particularly if the products are stored at low temperatures or in an area that is excessively humid. Under these conditions internal stress and the weakening of the binding agent may develop. Difficulty may also be caused by powders which are not granular enough when the product is tabletted. The wrong binding agent may deteriorate under adverse conditions and lose its powers of adhesion. The pressure of the tabletting press may also be a factor in causing cracking or crumbling of compact solids.

Poor distribution of color or ingredients usually is due to inadequate mixing or the use of too concentrated a color solution. Dyes should be dissolved in water and normally a one percent solution is ample. It is also important to determine whether the dyestuff can withstand acids, alkalis, oxidation, reduction and light, depending upon its application.

Not only must an efficient mixer be used for powders, but

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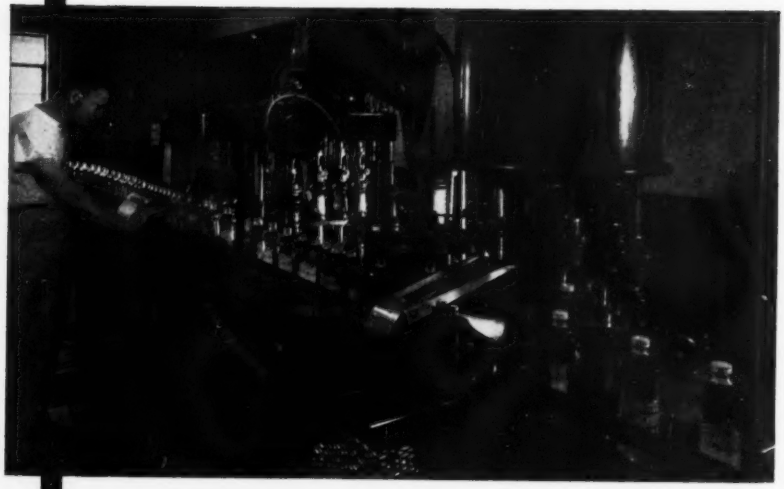
CaPeM SCREW CAPPERS

Speed production for Texize Chemicals, Inc.



This Model D-6-F Rotary CaPeM increased production to such an extent that Texize Chemicals, Inc., Greenville, S. C. recently ordered a duplicate. This completely automatic line is operated continuously at production rates in excess of 200 bottles per minute.

CaPeM Screw Cappers apply all types of metal and plastic screw caps to jars, bottles, cans and jugs ranging in size from 1 oz. to gallons. Speeds range from 40 to 300 containers per minute. Write for complete information.

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1400 WEST AVENUE, BUFFALO 13, NEW YORK

micronizing or passing the finished product through a disintegrating mill aids in good distribution.

Color changes, induced by other ingredients in a product such as perfume, may also take place. Darkening or off shades may result during aging from other ingredients in the formulation. A reaction between the package and its contents may be the villain in the piece. Such reactions may be chemical in nature or caused by absorption of ink or impurities in the paper where cardboard canisters or fibre drums are employed.

Liquids

LIQUID preparations may consist of clear solutions, emulsions, colloidal solutions or solids suspended in liquids. All of these deteriorate to some degree, but emulsions usually are the most troublesome. Clear liquids may become cloudy, form a sediment or develop unsightly floater or precipitate. Colloidal solutions may become thinner or separate into a clear and a cloudy layer. Solids suspended in liquids separate by sinking or floating, or form a coating on the bottle. Emulsions break, thicken, curdle or separate into two layers. Color changes and off odors may develop in any of these liquids.

Determining the cause and correcting it are not simple in most cases.

Clarity and sparkle are imparted to clear solutions by correction filtration, with or without a filtering aid. Aging, filtering at lower temperatures, lessening the amount of solute, subjection to the action of ultra-violet light, sufficient attention to storage conditions to guard against corrosion or contamination, the use of a chelating agent, and blowing air slowly though the liquid for several hours usually can correct cloudiness and sedimentation. The best procedure is to test first small samples or pilot plant quantities to determine which of the methods mentioned above produces the best results.

Separation of emulsions on aging is most likely caused by incorrect manipulation when putting the ingredients of the product together. The right balance of water, oil and emulsifying agent is of the utmost importance. The purity of both the raw materials and the softened water to be used should be checked carefully, especially when soaps are the emulsifying agents. The use of an efficient mixing equipment is essential to the making of stable emulsions. The use of colloid mills or homogenizers for subsequent treatment of emulsions insures stability.

Other factors that are important in the making of good emulsions are: temperature at which the emulsion is made, control of pH, quick cooling if emulsion is made hot and the addition of an inert thickening agent or stabilizer, such as certain gums or wetting agents. The method of emulsification must be standardized on carefully once satisfactory results are obtained. If the emulsion thickens with age, as frequently happens, laboratory experiments using different proportions of ingredients or a change in the emulsifying agent aid in the diagnosis and correction of the condition.

A deficiency in a colloidal solution may usually be traced to the use of the wrong type of colloid or gum, certain incompatibilities of the gums or colloids with other ingredients. Many colloidal solutions appear quite satisfactory when first made, but later thin out with age. Gums should be aged for several months prior to their use in colloidal solutions. When starch is employed as the colloid, care should be taken not to use too much in any item as it may thicken on standing. Gelatin should not be used with gums. Too high a percentage of alcohol often precipitates gums. Alkalis, on the other hand, may thicken colloids.

The least troublesome liquid products, if made correctly, are those based on suspension of solids in liquids. Defects can usually be covered by use of an opaque package or recommending shaking before use in directions on the label. Keeping solids in suspension or getting them to settle sharply are the two big problems encountered.

Several dispersing agents are available for permanent dispersion. Experimentation is required to determine the one best suited for the particular product and also to work out the correction proportion of solids to liquids. It is sometimes advisable, if the solids are heavy, to increase the gravity of the liquid portion with an inert salt. To make the solids settle sharply, a wetting agent may be added to the liquid to reduce surface tension. The use of magnesium carbonate helps to overcome firm packing of solids on standing.

Pastes

DEFECTS that show up in pastes or creams are among the more difficult problems to solve. Separation, shrinkage, cracking of the surface, hardening, discoloration, rancidity and formation of gas are imperfections found in paste or cream products. These products may also deteriorate as a result of the presence of bacteria or fungi. Contact of the product with the jar cap or the tube used in the packaging may cause corrosion or deterioration. Although it is extremly difficult to assign particular causes for these specific defects that show up in pastes or creams, it is known that there are certain general precautions to be followed in avoiding troublesome conditions. Among the general reasons for adverse product changes are storage at excessively high temperatures; incompatibility of ingredients, such as acids or heavy metals in soaps; absence of colloidal protection; use of the wrong binder, too little or too much binder, excessive absorption of liquid ingredients, slow chemical reaction taking place between ingredients, poor balance of liquids to solids.

Pastes packaged in collapsible tubes are susceptible to several defects. In some cases the corrosive action of the product can cause complete disintegration of the tube.

(*Turn to Page* 183)

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DOW

SOAP PLANT Observer

By John W. McCutcheon

JAPAN is one country in which soap production is on the increase. One reason for this is the widespread availability of soft water. In the U. S. we probably destroy half the soap used (when we were still washing with the stuff) through water hardness.

In Japan, notably a clean country, the people get along on less than 10 pounds of soap per person per year. Production in 1955 was 279,177 metric tons, an all-time high, and 18 percent over 1954. An estimated 186,000 tons of fats, oils and fatty acids were used in soap production in Japan in 1955. Refined glycerine production in 1955, off about two percent from the previous year, amounted to 5,792 metric tons. A gradual decline in glycerine production has been in force since 1953, when 6,125 tons of refined glycerine were produced. Glycerine exports from Japan last year were put at 3,012 tons (crude), a drop of 25 percent from 1954, when 4,022 tons were exported. This last figure included 500 tons of refined.

Tallow was the major material in the production of Japanese soap. It represented 65 percent of the soap fat used. About 100,000 tons were of American origin and represented about 55 percent of the total fatty raw material. American tallow producers, therefore, have a big stake in what Japanese soapmakers are doing. Actually, in 1955, Japan took 17 percent of all American tallow exported. Most exports of tallow are for the same purpose: soap making.

The ration of fat to soap, based on the above figures, seems very high, working out to an average of 70 percent fat content. Since toilet soap output is nominal, it means that laundry bar and washing powders must be high in soap

content. This does not seem right, somehow, even with water under 50 ppm!

Another puzzling feature of these figures is the low glycerine recovery. It would seem as if glycerine production should be twice as high, or about 18,000 tons of crude and refined annually.

Interesting are the figures on the use of soap powder, which is increasing in popularity by leaps and bounds. It sounds like the United States in the early Thirties.

The data on which the foregoing figures are based was supplied to us by Mr. G. Hara of Nihon Yushi Co., Ltd., Chiyodaku, Tokyo, Japan, who periodically translates a report on fat and oil products and raw materials in Japan.

* * *

THE preliminary Tariff Commission report on 1955 production and sales of synthetic detergent materials came to hand a few weeks ago. The trend is the same as last year, with a steady overall increase in production (about 12 percent annually) most of the increase is reflected in dodecylbenzene sulfonates. The figures in metric tons for 1953, 1954 and 1955 are: 182,000, 193,000 and 223,000, respectively, indicating an increase of about 15 percent per year which accounts for about 50 percent of the total increase. Last year, the 12 percent was confined almost exclusively to the cyclic group of products, of which dodecylbenzene is one. Others of this group showing substantial increases are miscellaneous sulfonated benzenoid compounds (15,000 tons over 1954) and nonsulfonated nonylphenoxy polyethoxyethanol ethers (12,500 tons over 1954). Some of the "Tritons" and "Igepals" belong to this class, among many others. These three items accounted for 57,500 tons out of the 64,000 ton increase, or 90 percent of it.

Now, what happened to the acyclic group? It remained practically unchanged; small gains in the esters and nitrogen derivatives were offset by losses in the sulfonated fat group.

Incidentally, sulfonated tallow and sulfonated petroleum products both showed a drop. If anyone cared to move forward commercially on detergent raw materials, it would appear that his approach should be cautious. Without a drastic price change in the tallow picture, the sulfonated alcohols are just beating time. The big factor in the price of tallow at present is the billion pounds or so exported. This is a large and important market. On the other hand, the steady 12-15 percent advance of dodecylbenzene must reach a plateau some time. Still, a 130 million pound a year market for dodecylbenzene does look attractive and one cannot blame petroleum manufacturers for wanting a look in. It definitely is not a market for amateurs!

* * *

SUN OIL CO. is offering naphthenic acids for sale in three grades: "Sunaptic" Acids A, B and C. Their molecular weights are controlled within the following limits. A — 290-300, B — 320-330 and C — 410-420. The acids contain six, eight and 10 percent unsaponifiable matter, respectively, as oil

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and are useful in their alkali and alkali earth metal salts for various purposes where stability, high hydrocarbon solubility and low freezing points are desirable. Diglycolnaphthenate, polyethylene glycol esters and mono or bis chloroethyl ether esters, are all suggested as dispersing, detergent, wetting, and defoaming agents. The sodium and potassium salts are emulsifying agents and the metallic salts are oil additives, etc. In addition to these simple esters and salts, there exist groups of derivatives similar to those types derived from fatty sources, such as the nitriles, alcohols, amines, etc. Detergent chemists must not overlook such type materials in setting up a market development program in this field or in any attempt at evaluating trends in the market.

* * *

CHROMATOGRAPHY as a method of chemical analysis has come up for discussion several times in the past year. Gas chromatography was discussed in this column in April on page 97. Last month a very interesting film on paper chromatography was presented at the Chemists' Club by H. Reeve Angel & Co., 52 Duane Street, New York 7, N. Y., makers of Whatman and other filter papers. The film aimed at an elementary explanation of the subject and was beautifully done. Single and multiple solvent techniques were illustrated in one way and two way displacement systems.

In two way separations, for example, a drop of the unknown solution is placed at one corner of a large filter sheet (eight by 10 inches), dried and then placed in a special holder so that the lower edge dips in a solvent. Development of the chromagraph takes place along the vertical side. After such development, which takes two to four hours, the frame is removed, the paper dried and replaced in a second solvent after rotating the paper 90°. Development now takes place along the original horizontal line so that each original fraction is re-fractionated or separated in another direction. After development of the paper by means of reagents yielding colored products, the separated compounds appeared as dime size dots along a well formed curve. The example illustrated protein acid separation.

H. Reeve Angel & Co. is experimenting with various types of paper, some of which are in commercial production. For example, acetylated cellulose gives a more polar surface for aqueous development; glass fiber is another paper under study. In one case cited, the glass fiber was impregnated with a developing absorbent such as magnesium oxide. After separation the color reaction was obtained by dipping in concentrated sulfuric acid. The glass fiber type paper could withstand this treatment. Paper was also shown made partly or totally from various other synthetic materials including ion exchange resins.

Undoubtedly the technique of these procedures will soon be taking its place in standard testing methods and it would pay all analytical chemists to buy a few books on the subject.

A small house organ called "Chromatographic Methods," (first issue Vol. 1, No. 1, Jannary, 1956) is published by the H. Reeve Angel & Co., Inc. At the present time it is available on request.

Several unsolicited sales brochures on equipment concerned with chromatography crossed this desk in recent weeks and may prove of interest here. They are Brochure K-25 *"Specifications & Description of Kensco Chromatography Apparatus and Accessories,"* Kensington Scientific Corp., 98 Rincon Rd., Berkeley 7, Calif. This is a 12-page catalog with prices listed separately. Also Ultra-Violet Products, Inc., 5114 Walnut Grove Ave., San Gabriel, Calif., issue a small bulletin called *"Ultra Violet for Chromatography Laboratory Research and for Use in Making Group Examination."* Prices of equipment are included.

In addition to, and as a supplement to the writer's comments on "Gas Chromatography" in the April column, the reader is referred to Brochure W10 published by Wilkens Instrument & Research, Inc., Acheson Bldg., Berkeley 4, Calif. on their *"Aerograph for Gas Chromatography."* This is a small four page brochure with prices listed separately.

Why is it that New York and California are the only chromatographic states?

★

New Sharples Catalog

A new catalog of "Sharples" brand synthetic organic chemicals is now available, it was announced recently by Pennsylvania Salt Manufacturing Co., 3 Penn Center Plaza, Philadelphia 2, Pa. Listed in the 12 page brochure are 77 commercially available products, with formulas, product descriptions and uses. In addition the brochure contains detailed information on 22 semi-commercial and 17 experimental compounds, samples of which are available in limited quantities from the company. Copies are available upon request.

★

Patent Issued to Calgon

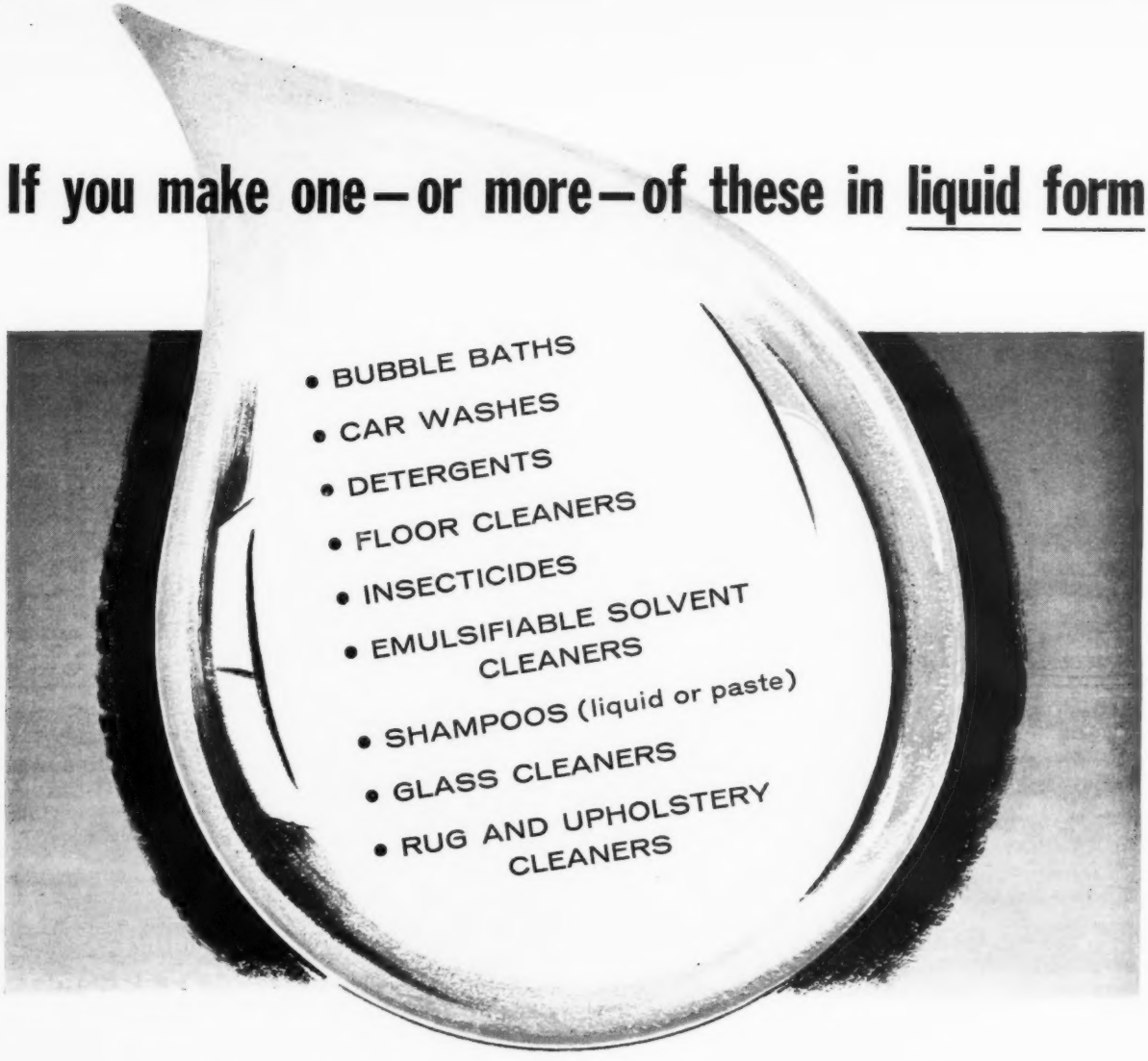
A patent covering detergents being sold under the trade name "Aura" was issued recently by the U. S. Patent Office to Calgon, Inc., Pittsburgh. The patent covers various combinations of chlorinated ortho and polyphosphates developed by Calgon for mechanical dishwashing of tableware. The product is said to be effective for plastic and chinaware which is subject to staining.

★

Detergents CCDA Topic

A panel discussion of detergents and their marketing will be a feature of the fall meeting of the Commercial Chemical Development Association, on Nov. 1, at the Terrace Plaza Hotel, Cincinnati, it was announced last month by W. E. Elwell, Oronite Chemical Co., N. Y., chairman of CCDA's public relations committee. Detergents will be discussed by a panel in a morning session and in individual papers in the afternoon.

If you make one—or more—of these in liquid form



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New "Wool-n-Wash," a high sudsing cold water detergent designed for washing wools, wool-blends and synthetics is being introduced nationally by Monroe Chemical Co., Quincy, Ill. In addition to sudsing abundantly in water under 75 degrees, product contains an anti-static additive to cut clinging and creeping in all synthetics. Sixteen ounce glass bottles, applied color labels and white molded plastic closures are all made by Owens-Illinois Glass Co., Toledo.

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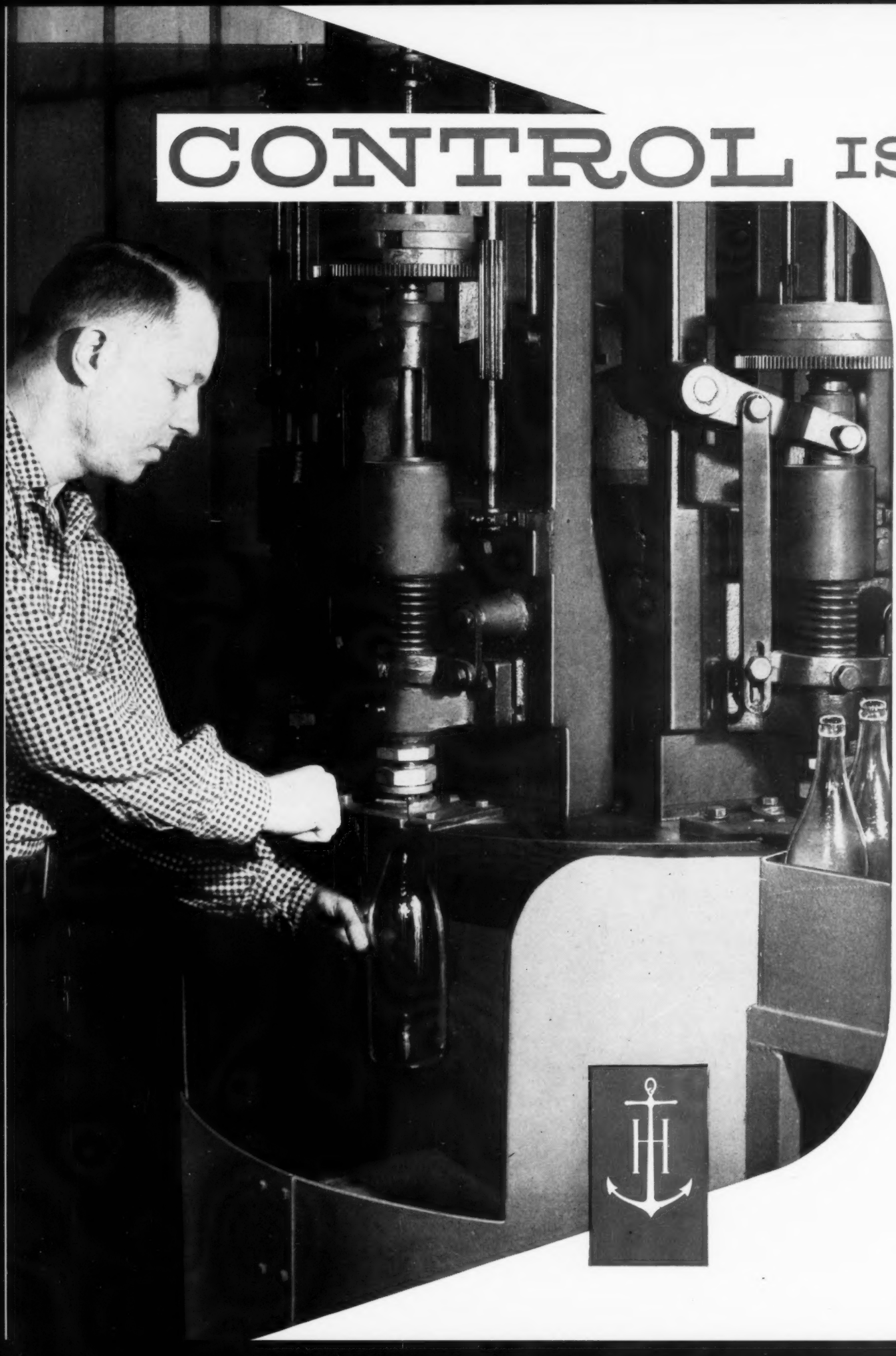
Detergents
Deodorants
Disinfectants
Floor Products
Insecticides
Laundry Bleach
Metal Cleaners
Moth Products
Polishes
Shampoos
Shave Products
Soaps
Liquid Starch
Toiletries
and other
Chemical Specialties

A market for over 20 billion packages annually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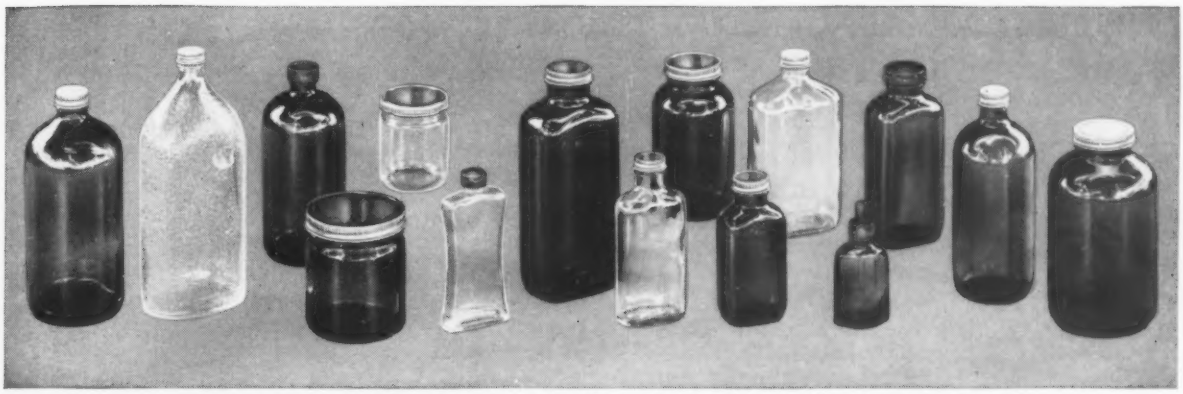
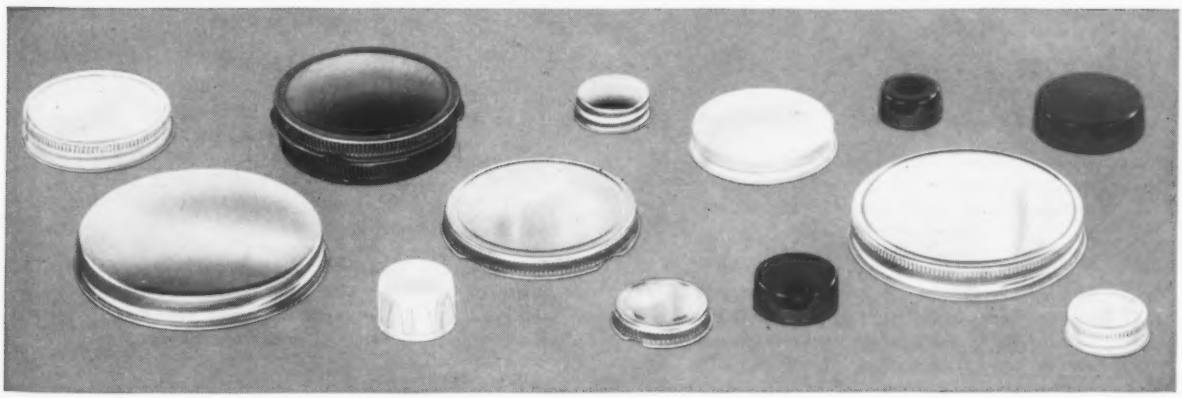


Regardless of what you pack Anchor Hocking makes an Anchorglass container in a style, size and color to most attractively, efficiently and economically package it. And, to seal your glass-packed products, there are Anchor molded screw caps and metal screw, lug and vacuum types available—one or more of which will completely satisfy your diverse and specialized requirements.



THE controls applied throughout your production and packaging operations are all-important to you. By the same token, the manufacturing controls employed by Anchor Hocking are very important to you, also.

Anchor Hocking exercises literally hundreds of exacting controls, tests and checks daily in the manufacture of its glass containers and closures. From the selection of all raw materials used to the final inspection, every operation is under meticulous control.

And all of this control, involving highly trained chemists, bacteriologists, engineers, other technicians and personnel, is done but for one reason. And that is, to provide you with uniform, high quality, dependable Anchorglass® containers and Anchor® screw, lug, vacuum, metal and molded closures that will give you high-speed, dependable production and protection.

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November 1st...

Closing date for entries in the 1956 AEROSOL AWARDS package competition is November 1. Awards to be made at the 43rd Annual Meeting of the

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

MAYFLOWER HOTEL, WASHINGTON, D. C.

DECEMBER 3, 1956

. . . to include judging and selecting of best aerosol packages of the year

Divided into ten classes as follows:

1. Insecticides, repellents, moth proofers.
2. Room deodorants.
3. Lacquers, enamels, other protective coatings; paint remover.
4. Other household products—polishes, glass cleaner, rug shampoo, water repellent, etc.
5. Shave products.
6. Hair preparations.
7. Other personal products — shampoo, body deodorants, sun tan oil, drugs, etc.
8. Snow, all types.
9. Industrial products — lubricants, belt dressings, stencil inks, etc.
10. Glass and plastic packages — all products.

. . . a top award for "best in the show" will also be made

Rules of the contest:

1. All entries must be made in the name of the brand owner or marketer. All products entered must have been freely offered for sale on the open market.

2. Entries will close November 1, 1956. All entries should be sent as soon as possible to the Committee at the CSMA office, and should comprise one completely assembled empty container with attached tag showing (a) name and address of brand owner, (b) class in which entry is made.

3. Only one entry may be made by any marketer or brand owner in any one class, but entries may be made in as many classes as desired.

4. Products entered must be properly labeled in accordance with safety requirements and all laws and regulations pertinent to particular products.

5. Entries are open to any aerosol brand owner or marketer anywhere, and are not restricted to members of CSMA. There are no entry fees or other charges to entrants.

6. Best packages will be selected in ten classes and a "best package in the show" will be named. Judging will be done by a group of qualified experts. Their decisions will be final and will be announced and awards made at the 43rd annual meeting of CSMA in Washington.

For entry blanks or information, write to
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NOW, you can take a big step toward increased efficiency and customer satisfaction for your aerosols by standardizing on Newman-Green valves for all your products. Advantages of these proved-performance valves include faster pressure filling, new and improved design to eliminate clogging, wide choice of colors *plus* our guarantee that every valve is tested before shipment. Steadily increasing demands for Newman-Green valves are being met by continued expansion of production facilities.

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4. Designed primarily for snow and paint but is being used most successfully on other formulations as well.

Our technical staff is available for consultation on your aerosol valve problems without cost or obligation to you.

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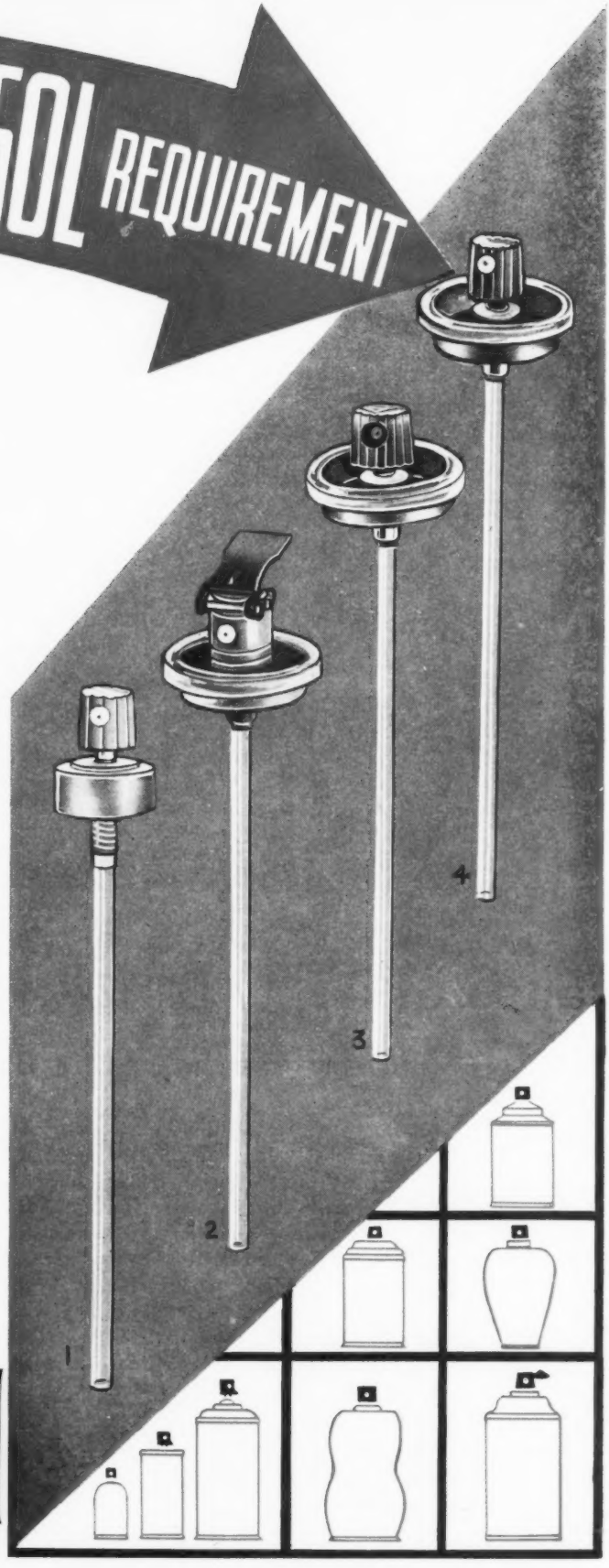

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New fluid flow cans with polyethylene nozzle assure even pouring and exact, dripless cut-off

Tailor-made for liquid detergents and other corrosive products, Continental's recently-announced fluid flow cans incorporate a threaded, dripless polyethylene nozzle which is an innovation in the general line packaging field. Attached by a special Continental-engineered method, the tall nozzle permits an even pouring flow and provides an abrupt, exacting cut-off when pour is completed.

New enamel linings perfected by Continental's Research and Development department make these cans ideal for many products which could not be previously packaged in metal. In addition, a resistant varnish is available to prevent any marring of the lithographed surface through spillage in filling or use.

No solder is used anywhere in the construction. The side seam is cemented with thermo-plastic cement which permits complete wrap-around lithography. Can domes or tops can be supplied plain, coated, or lithographed in colors. Nozzles come in colors to closely match decorative designs. Manufactured in 12-, 16-, 22-, 32-oz. and half-gallon sizes.

Threaded polyethylene nozzle is dripless. Attached by solderless method — no solder margin to steal from lithographed area.

BACK VIEW

Side seam is securely cemented, permitting complete wrap-around decoration. No wide soldered seam to interrupt your selling message.

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EASTERN DIVISION: 100 E. 42nd St., New York 17
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Packaging NOTES

Elder Heads Plax

Plax Corp., Hartford, a subsidiary of Emhart Manufacturing Co., Hartford, recently announced

Robert F. Elder

the election of Robert F. Elder as its first president. He had previously headed the firm in the position of executive vice-president. Prior to joining Plax, Mr. Elder was a marketing consultant and vice-president in charge of affiliated companies of Lever Brothers. He joined Lever in 1937 as director of market research. A graduate of Harvard, where he majored in chemistry, Mr. Elder began his business career as a research chemist for the organization controlling the "Technicolor" process for motion pictures. In 1927, he became market analyst for Brown Co., a New England pulp and paper concern. Following his receipt of the Alvin Simonds award for the best paper on "Reducing Costs of Distribution," M.I.T. invited Mr. Elder to become professor of marketing, a position he held from 1929 to 1937. During that period he acted as a consultant for many prominent industrial organizations.

★

Packaging Symposium

A symposium on "How Consultants' Know-How Applies to Packaging of Consumer Goods," will be held following the annual meeting of the Association of Consulting Chemists and Chemical Engineers, Oct. 23, at the Belmont Plaza Hotel, New York.

L. C. Cartwright, Foster D. Snell, Inc., New York, will be guest speaker, while Maurice S. Sage, Sage Laboratories, Inc., New York, will be moderator. Prior to the symposium, there will be a cocktail hour, scheduled to begin at 5:45 p.m., and banquet. Reservations should be made not later than Oct. 18, and tickets are available from the association at 50 East 41st St., New York 17, N. Y., at $10 per person.

★

AMA Packaging Review

A 144-page cloth bound volume entitled "Packaging Serves The Nation," has been published by the American Management Association, 1515 Broadway, New York. The book is a review of the AMA's silver anniversary National Packaging Exposition, held last April at Atlantic City. The contributions packaging has made to the nation in the past 25 years are discussed by specialists in 15 different industries. Packaging and product changes in the soap and detergent industry that have taken place in the past 25 years and future developments are covered in an article by Frank J. Reilly, editor of *Soap and Chemical Specialties*.

The nine by 12-inch book is divided into two sections, plus a foreword by Lawrence A. Appley, president of the American Management Assn. Part one includes an article on the growth of the packaging market, now estimated at $10 billion annually. A review of the early days of the show, with pictures of the first exposition in 1931, a discussion of the conferences held in conjunction with the packaging show and an outline of the aims and purposes of the AMA conclude the first section. Packaging from the industrial consumer's standpoint is reviewed in a series of articles in part two. Photographs of all groups and exhibits at the 1956 show appear in this section.

★

Kiefer Names Scanlon

William M. Scanlon has been appointed mid-eastern sales representative for Karl Kiefer Machine Co., Cincinnati, it was announced last month. Mr. Scanlon, working out of the Philadelphia branch, will cover eastern Pennsylvania, Delaware, the District of Columbia, Maryland, Virginia and southern New Jersey. He is a graduate of Columbia University and before joining Kiefer had been a branch manager for Toledo Scale Co.

William M. Scanlon

★

Folding Box Meeting

The 24th annual meeting of Folding Paper Box Association of America, Chicago, will be held March 16 to 18, 1957 at the Drake Hotel, Chicago, it was recently announced by Gustav L. Nordstrom, executive secretary.

Besides speakers, the program will include a complete display of entries in the annual folding paper box contest, and announcement of the 100 winners. The first contest was held in 1945 and attracted 200 entries; last year's contest drew 7,027. The competition, which runs from Nov. 1 to Dec. 31, is open to members of the Folding Box Association. Entries are judged on quality, ingenuity and usefulness of the boxes.

This Gun is Loaded!...

...WITH DESIGN FEATURES THAT MEAN MAXIMUM CUSTOMER SATISFACTION

R.C.'s new anti-clog SPRAY GUN

● **ANY-DIRECTION VENT**—even sprays upward, for under side of foliage. Preformed in just the right size; no danger of user punching hole too large or too small for proper use.

♦ **CLOG-PROOF FEED**—Scientifically perforated underside of plug permits powder to pass through... prevents lumps from clogging discharge vent.

■ **EASY-FILL TOP**—Large 1⅞" friction plug.

✱ **WAX-COATED INNER TUBE**—Special wax gives moisture protection and smoother pumping action.

○ **SPECIAL FELT INNER VALVE**—Allows easy passage of air during pumping action, yet effectively seals in powder.

▲ **PATENTED BELLOWS VALVE**—Positive operation—opens on back stroke to admit air into pumping chamber; closes on forward stroke, for efficient pumping action.

..and for added ammunition..these COMPANION PACKAGES by R.C.

For refill, or for related use, R. C. Cans offer many extra features: paraffin coating, special moisture proof laminations, and a wide variety of tops (with or without identations for sifting).

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In New S & S Posts

Stokes & Smith Co., Philadelphia, a subsidiary of Food Machinery & Chemical Corp., New York, has named Richard C. Smith, Jr. as sales manager of paper box equipment, and J. Y. Albertson as chief engineer. Mr. Smith, a graduate of Yale University, joined Stokes & Smith's sales staff in 1952. Prior to that, he represented the company in the New England area. He succeeds S. E. Child who is retiring after 45 years with the company. Mr. Albertson, who has been a member of the firm's engineering staff for 26 years, replaces C. H. Nitsch, who also has retired after 45 years with the firm.

Richard C. Smith

★

New Glass Coating

A new surface treatment for glass containers, called "Duracote," has been developed by Owens-Illinois Glass Co., Toledo, it was recently announced. According to O-I scientists, "Duracote," is durable, non-toxic, permits easy labeling and can be used on all types of glass containers.

The product, described as both a material and a process, is a water insoluble organic polymer, applied in relation to temperature and cooling rates. The organic polymer is applied to the new glass containers at the glass plant as they move from the forming line through a cooling cycle in annealing lehrs. "Duracote," which has received a Federal Food and Drug Administration non-objection ruling, is expected to eventually replace surface treatments such as sulphur dioxide, silicone, and stearate wax, previously developed by the company.

★

Hazel-Atlas Income Off

Hazel-Atlas Glass Co., Wheeling, W. Va., reported for the first six months of 1956 net earnings of $702,325 or 32 cents per common stock share, compared with $1,618,503 or 75 cents per share for the same period in 1955. First half 1956 net sales totaled $37,535,322, as against $40,025,154, a year earlier. A decrease was reported also for the second quarter of '56 as net income in the period fell to $286,764 or 13 cents per share as against $924,782 or 43 cents per share a year ago. Net sales for the second 1956 quarter totaled $19,254,023, as against $20,308,634 in 1955.

★

Exact Scale Merger

Stockholders of Keever Starch Co., Columbus, O., have voted in favor of merger with Exact Scale Co., New York, it was announced recently by Charles J. Kurtz, Keever president. Mr. Kurtz said 40,618 shares, or 93 percent of a total of 43,635 outstanding, were voted without a single ballot being cast against the proposal.

Canco Record Sales

Sales and earnings of American Can Co., New York, for the three and six month periods ending June 30th, were the highest for any similar period in its history, it was announced recently by William C. Stolk, president.

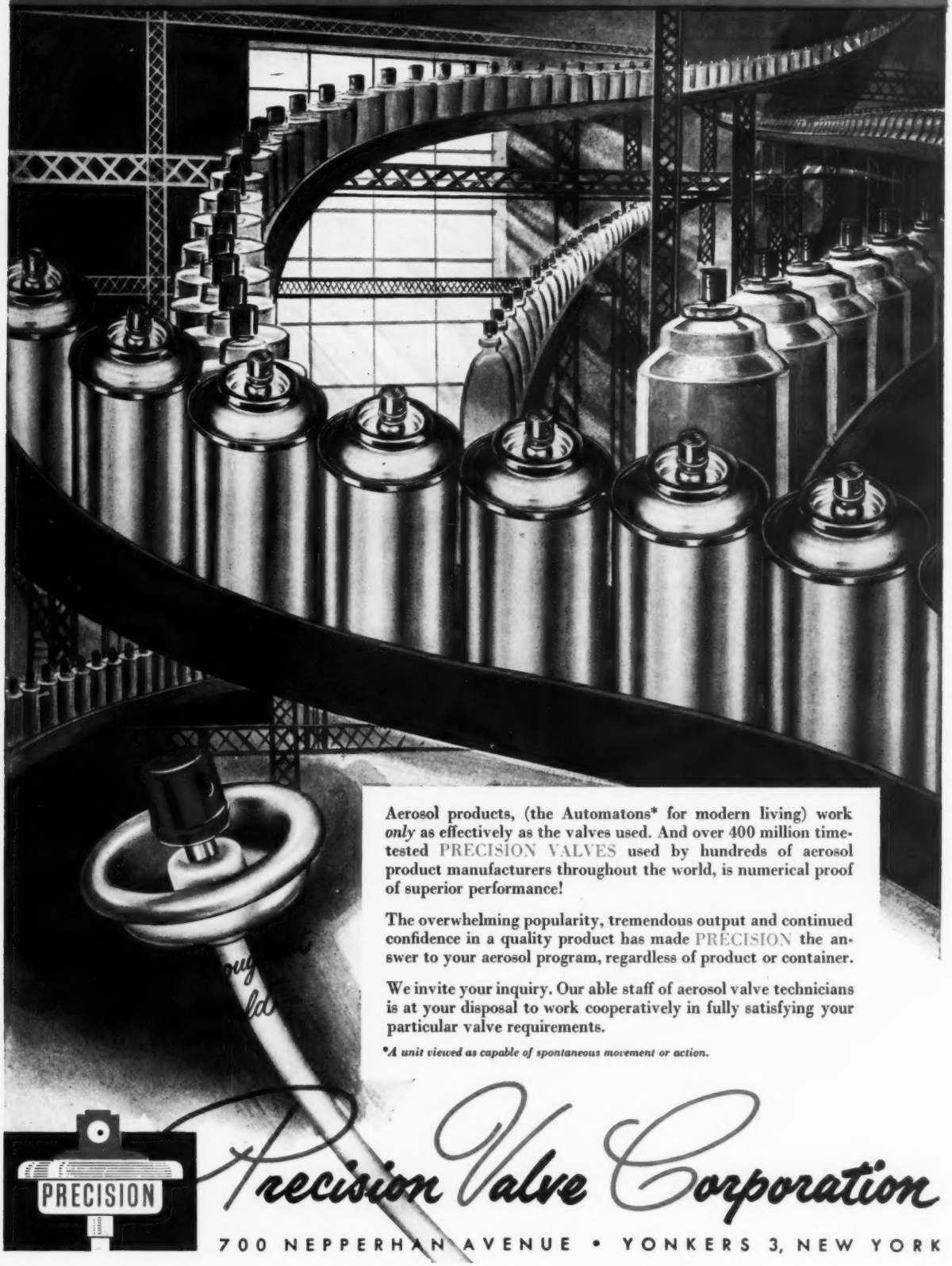
Net income in the first six months of this year, amounted to $15,030,893, equal to earnings of $1.25 per common share, compared with $14,417,672 and $1.19 a year earlier. Sales and rentals increased 13.1 percent to $348,025,248 for the first half of 1956, from the $307,839,962 volume for the 1955 half year.

Second quarter '56 net earnings were $9,330,509, equal to share earnings of 79 cents, against $9,172,584, equal to share earnings of 77 cents, in the June quarter last year. Sales and rentals for these quarters were $192,764,410 and $171,117,272, respectively.

Mr. Stolk stated that heavy advance buying early in the year, in anticipation of higher container prices, was the major factor in the sharp increases. He added, however, that it did not effect business to the extent expected in the second quarter and that prospects were favorable for a continued high level of business for the remainder of the year.

Technician checks two bottles during an abrasion test at the O-I laboratories in Toledo. The test simulates the glass-to-glass contact of bottles on a filling line in a bottling or packing plant.

THE *Aerosol Valve* FOR YOUR PRODUCT *by Precision*



Aerosol products, (the Automatons* for modern living) work *only* as effectively as the valves used. And over 400 million time-tested PRECISION VALVES used by hundreds of aerosol product manufacturers throughout the world, is numerical proof of superior performance!

The overwhelming popularity, tremendous output and continued confidence in a quality product has made PRECISION the answer to your aerosol program, regardless of product or container.

We invite your inquiry. Our able staff of aerosol valve technicians is at your disposal to work cooperatively in fully satisfying your particular valve requirements.

**A unit viewed as capable of spontaneous movement or action.*

PRECISION

Precision Valve Corporation

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What's New?

Redesigned one-gallon container with lithographed two-color label and the addition of a 12-ounce size plastic squeeze bottle for its "Win-sem" vinyl flooring wax-cleaner were announced recently by Windsor Wax Co., Hoboken, N. J. "Win-som," introduced earlier this year, cleans and dries quickly, the maker says, and can be buffed with electric floor machine immediately. Eastern Can Co., Brooklyn, supplies the lithographed cans. The new polyethylene squeeze bottle is for easy and economical dispensing, especially in touching up concentrated traffic spots. Plastic Art Decorating Co., Brooklyn, silk screen prints the plastic squeeze bottles.

New snapdown type dispensing station for "Sight-Saver" silicone treated eyeglass cleaning tissues was announced recently by George E. Marx, manager of consumer products sales for Dow Corning Corp., Midland, Mich. Stations, valued at $2.50, are available without charge to purchasers of the tissues. A price reduction of 10 cents, announced at the time of the introduction of the new dispensing station, brings the cost of an 800 "Sight Saver" tissue refill pad down to $1.35. Correspondingly greater price cuts were announced for volume purchases.

A light weight, finger tip control power duster was announced recently by E. C. Brown Co., Canandaigua, N. Y. An electric motor driven by two flashlight cells operates the high speed blower unit. A mechanical agitator is provided for controlling the proper feed of the dust. Housed in colored molded plastic, the unit utilizes a transparent plastic dust chamber of approximately eight ounce capacity. The "Push-Button Electric Duster" retails for $7.50.

"Duo-Dellay," rug and upholstery cleaner and soil retardant, designed for use on woolen, cotton, rayon and nylon fabrics, marketed by Artloom Carpet Co., Philadelphia, is packaged in a new non-drip container by American Can Co., New York. The container features a cemented sideseam that permits all-around lithography, an aluminum nozzle and plastic overcap. "Duo-Dellay" contains "Ludox," an anti-soiling agent made by du Pont. The product is being distributed nationally through major department stores. Retail price for the 22-ounce can is $1.49.

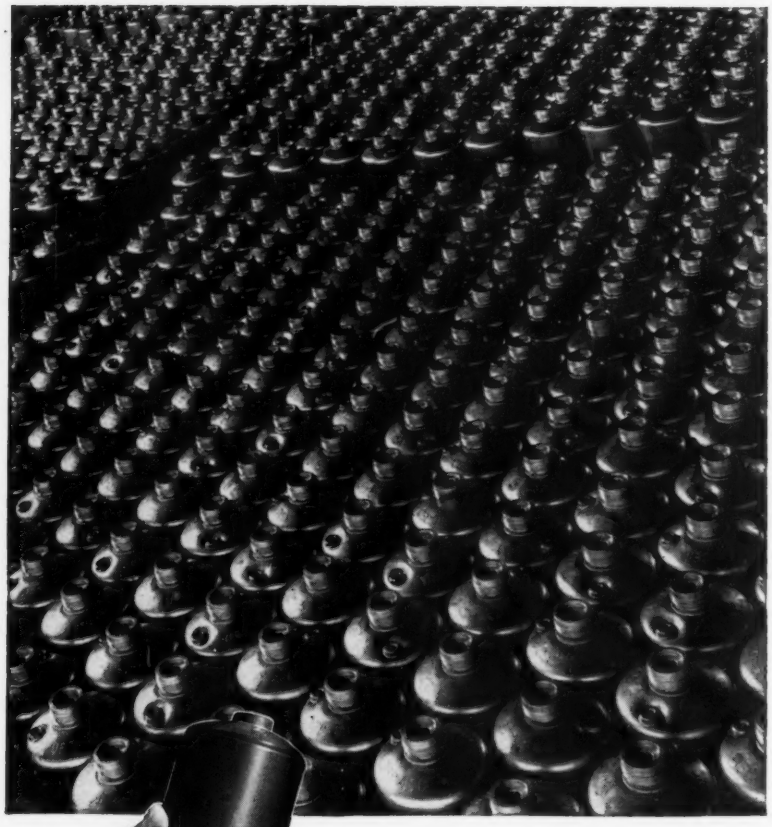
Four new Christmas gift packages—two for men and two for women—were announced recently by Amole, Inc., Dayton, O. Packages contain such items as bubble bath and cream sachet for women, and shampoo, tonic dresser, shave lotion, and deodorant for men. One gift comes in a double duty container. An imported French oil-and-vinegar bottle holds nine ounces of "Aquafoam" bubble bath in gardenia and pine scents. This single bottle is actually two separate containers joined into one. Products are packaged in color cartons.

Procter & Gamble Co., Cincinnati, is marketing its new "Biz," a blue liquid laundry concentrate for use in washing machines, in a new dripless container of American Can Co., New York. The product, which is available in pint and quart containers, can also be utilized for removing stains, and for household cleaning and dishwashing. It is being featured by chain and independent supermarkets and grocery stores throughout the nation.

A new cleaner "Formula 91," announced last month by Franklin Research Co., Philadelphia, is designed for use on floors of marble, terrazzo, ceramic tile, asphalt, rubber, vinyl and linoleum. It can also be utilized in cleaning washrooms, shower stalls, plastic, metal and ceramic fixtures. "Formula 91" is available in pints, gallons, five gallon containers and 55 gallon drums. Five gallon container has a polyethylene plastic pour spout.

Quickee Products, Inc., Yonkers, N. Y., has just announced "Quickee," a new tile cleaner and adhesive remover for use on asphalt and vinyl tile floors. The product, which is said to be non-flammable and non-toxic, is packaged in one pound jars and retails for $1.25. Glass jars are by Hazel-Atlas Glass Co., Wheeling, W. Va.

A new one and one-half ounce, pinch oblong bottle has been recently adopted by Sea Breeze Laboratories, Inc., Pittsburgh, Pa., for packaging the firm's "Sea Breeze" skin antiseptic. Bottles and molded plastic closures are by Owens-Illinois Glass Co., Toledo. Product will be distributed nationally through beauty and barber supply houses. Labels are supplied by Fuller Label & Box Co., Pittsburgh, and cellulose neck bands by Armstrong Cork Co., Lancaster, Pa.



are you Marketing under Pressure?

Packaging under pressure is commanding the attention of men alert to new competitive weapons. TMC King Size pressure containers for industrial uses are expanding sales and simplifying distribution of a wide range of fluid and semi-fluid materials.

Success stories are being built around paints, freon, insecticides, room fresheners, belt dressings, fire extinguishers, propane and many other products.

TMC disposable cylinders for aerosol use fit into production line filling procedures and save time and cost in shipping, stocking and distribution all along the line.

Standard 55 and 75 cu. in. sizes are I. C. C. approved.

The experience of Tube Manifold Engineering and Marketing men gives you the latest thinking on this important new development in marketing. Write or phone for full information.

INCREASES MARKETS FOR

INSECTICIDES AIR FRESHENERS AND CHEMICALS

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Fabricators of Tubular Products

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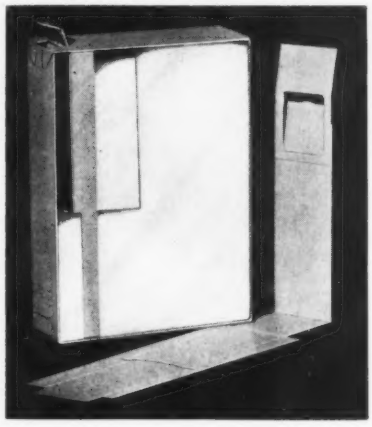
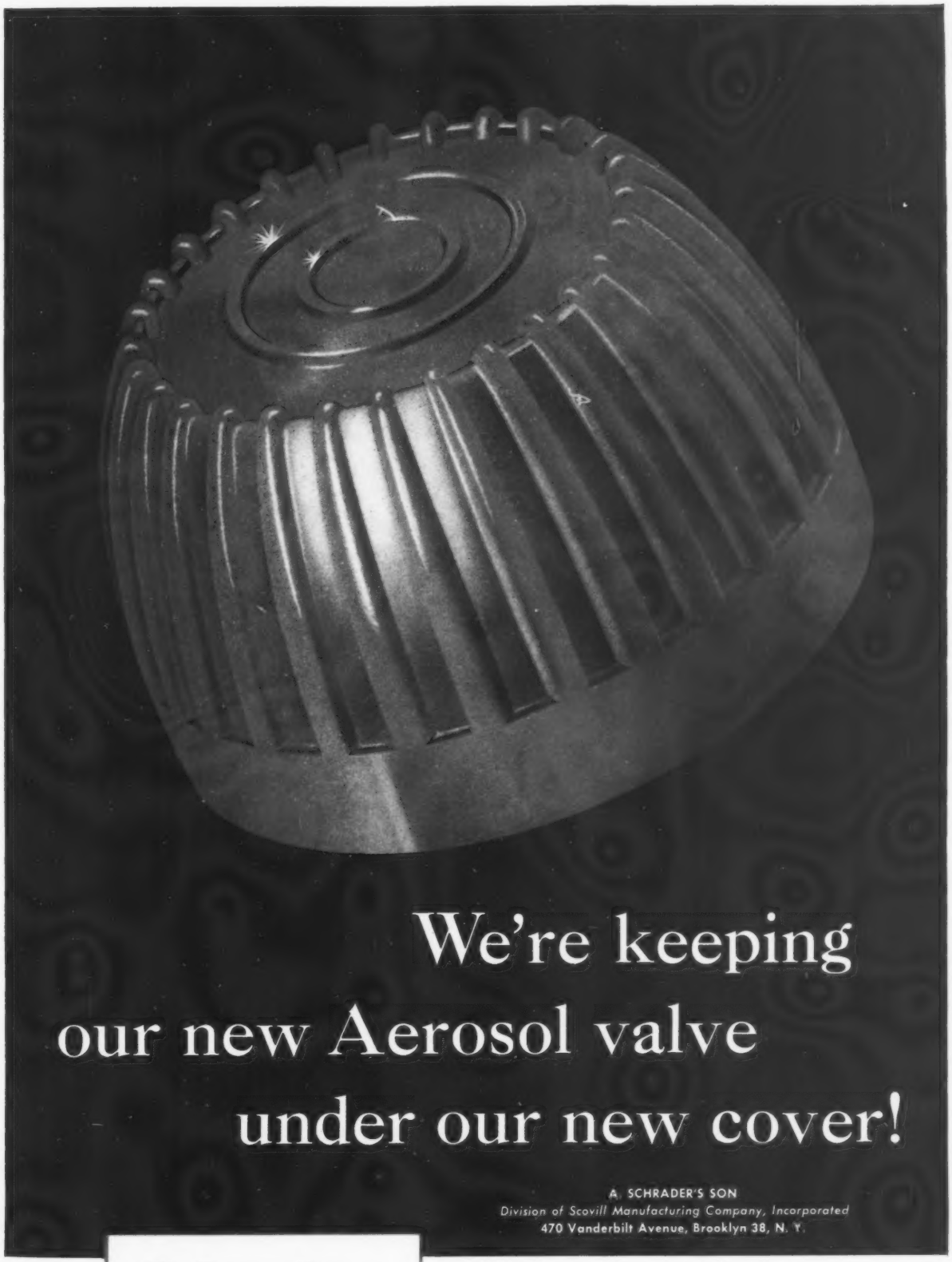
Detergent Metering Device

A new, automatic metering device, designed to dispense a predetermined amount of free-flowing materials such as soaps or detergents from packages, has been introduced by the United States Metered Container Corp., 527 Madison Ave., New York 22, N. Y., it was announced recently. The device, called "X-Akway," is a die-cut cardboard insert which when placed in the container, meters in set quantities free flowing materials.

The insert, which is said to be non-spill, consists of four parts permitting the material to be measured to pass automatically from one enclosure to another whenever the box is inverted. This, the manufacturer maintains, assures measuring accuracy of 97 percent. "X-Akway" can be inserted into the folding carton by the box manufacturer without loss of the original capacity at an increase in cost of a fraction of a cent in the finished product. It is available for use in the regular and giant size boxes of detergents. An amount of four ounces is dispensed in the regular-size box of dishwashing detergent while a slightly larger measure of detergents designed for laundry use is dispensed.

New metering device for dispensing predetermined quantity of soap or detergent in powder or bead form, has just been announced by United States Metered Container Corp., New York. Erected upright in the carton, unit permits a predetermined amount of material to escape from the loader through an opening in the top of the meter, upper left-hand corner, when the box is inverted. The loading area fills through a hinged valve simultaneously with the discharge of the contents.

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under our new cover!
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ESTABLISHED IN 1844
AEROSOL VALVES made by the
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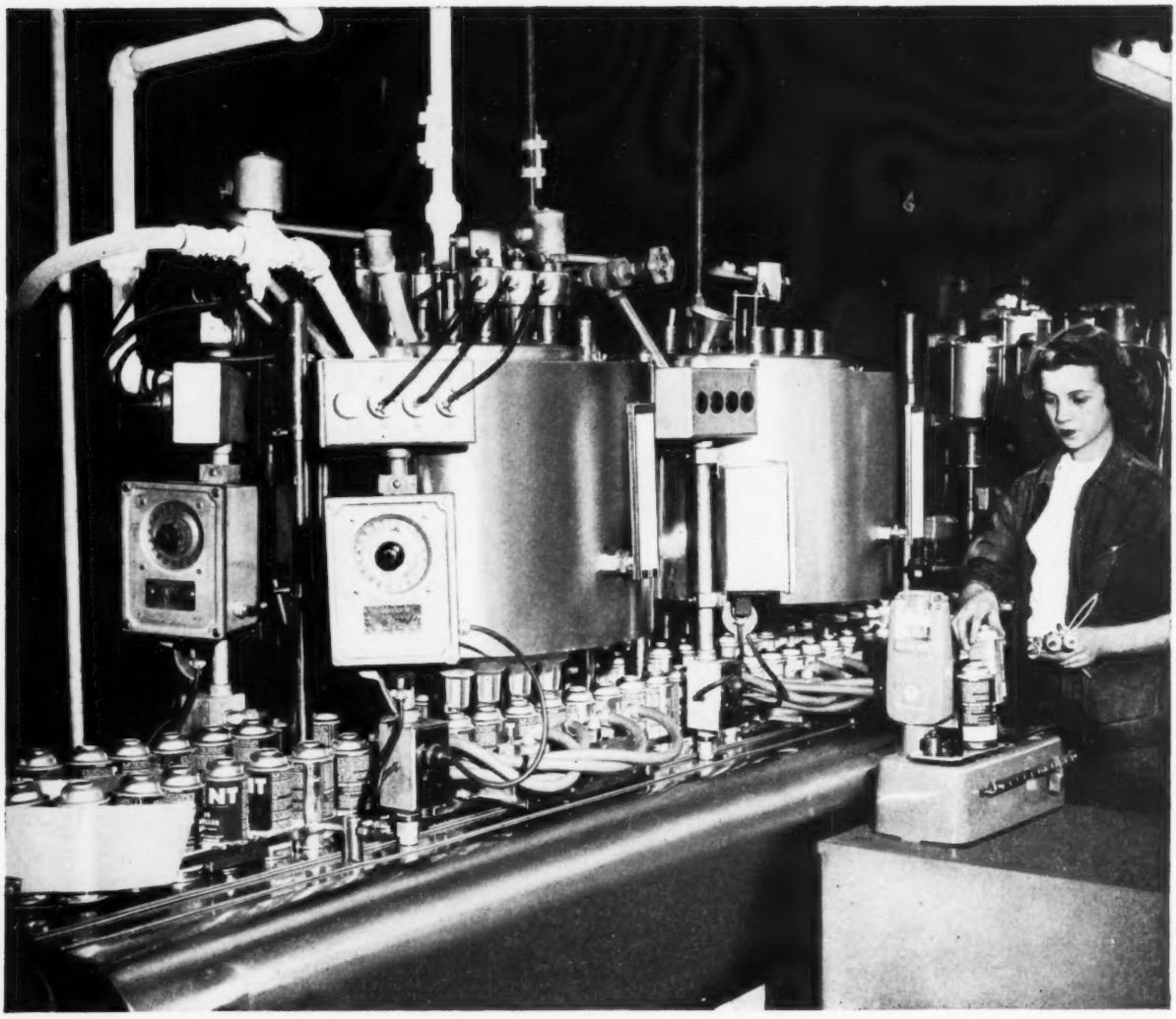


Contract Filling that will satisfy you . . . the buying public, too

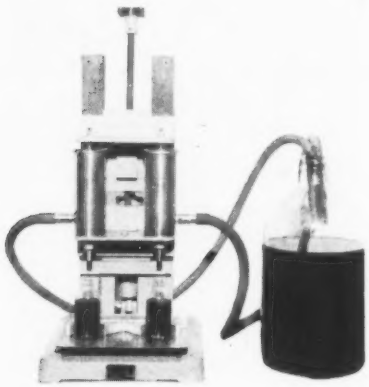
When we do contract filling (liquid, pressurized or aerosol) for you, we act as a division of your own company. Exact formulation is supervised by skilled chemists. The most modern equipment obtainable, operated by highly trained technicians, fills accurately; doesn't overfill or underfill.

No waste, but full measure for your customers. Neatness and performance of package is checked by our rigid quality control system. Establish "your own" filling department with us now. Write, 'phone or wire . . .

PETERSON
Filling and Packaging Co.
HEGELER LANE • DANVILLE, ILLINOIS

New Piston Filler

A new volumetric piston filler, "Accu-Measure", was introduced recently by the Scientific



Filter Co., New York. The filler can be utilized with containers of all types and is suited for accurate filling of polyethylene bottles, pressure spray bottles and cans. It may also be employed for filling pre-set exact amounts of liquids directly from supply source into final containers under total exclusion of air, and is effective with free flowing liquids such as nail polish, oils and also highly volatile liquids.

★

Inland Container Prices Up

Increases of slightly less than 10 percent in prices of steel drums and pails, were announced last month by Inland Container Co., a division of Inland Steel Co., Chicago. The new prices are said to represent an increase in steel prices and higher wages arising from a new contract that followed the steel strike. An Inland spokesman said that the adjustment in prices appeared to be comparable to those announced recently by other steel container producers.

★

Cellophane Price Rise

Prices on all converted cellophane and related products of the Shellmar-Betner division of Continental Can Co., Mount Vernon, O., have been raised approximately five percent, it was announced recently by Benjamin C. Betner, vice-president. The price adjustment is said to have been necessitated by increased wages, rising costs of materials and other basic elements including freight. In the past four years, according to a survey made by National Flexible Packaging Association, wages have increased 17.4 percent and cellophane prices have risen 5.9 percent, while industry prices generally on rolls and bags have decreased 14 and 21.4 percent, respectively.

★

Postpone Merger Meeting

The special meeting of stockholders of Continental Can Co., New York, called for Sept. 20, to consider the proposed merger with Robert Gair Co., New York paper box and carton producers has been temporarily postponed, it was announced recently by General Lucius D. Clay, chairman of the board. The postponement was necessitated by delays caused by the Department of Justice suit to prevent the acquisition by Continental of Hazel-Atlas Glass Co., Wheeling, W. Va. The government's action, made it impossible to prepare a proper proxy statement, General Clay said, and to obtain other necessary documents and clearances within the time schedule previously established. It is anticipated that a new date will be announced in the near future.

★

Crown Advances Kenny

The election of John J. Kenny as assistant treasurer of Crown Cork & Seal Co., Baltimore, was announced last month by Russell Gowans, president. Mr. Kenny joined Crown in 1943 as an accountant, becoming chief accountant in 1949 and manager of accounting last year. A graduate of Baltimore College of Commerce, and a C.P.A., he was a member of the Baltimore staff of Haskins & Sells, New York, before joining Crown. He is a member of the American Institute of Accountants, a director of the Baltimore chapter of the National Association of Cost Accountants, and a director and secretary of the House of Good Shepherd of Baltimore City.

New Lock Top Container

The development of a new metal lock-top container called "Savorlock" was announced re-

cently by Continental Can Co., New York. The container, designed for the packaging of powdered and granulated products such as laundry starch, powdered bleach and others, comes in two consumer sizes, 204 x 315 and 305 x 507. The lock top enables consumers to open and reseal the can while the cover, which is fitted with a pulp board liner and glassine tamper-proof seal, gives the product long shelf life. The containers are styled and proportioned to provide greater space for lithographed design and text on the selling label. In addition, a design feature enables the stacking of "Savorlock" cans to the full height of the normal store shelf. The filling and capping of the containers is essentially the same operation as the filling and capping of glass jars.

★

Anchor-Hocking Shifts

Four managerial appointments in its package sales division were recently announced by Anchor Hocking Glass Corp., Lancaster, O. N. J. Jensen, formerly head of the Philadelphia office, was named manager of the Rochester, N. Y. office. He will be replaced by P. E. Mallory. J. H. O'Keeffe has been named manager of the New York office, while L. S. McAllister has been appointed head of the Cincinnati branch.

IS THIS THE WORLD'S LARGEST DOME-TOP AEROSOL FAMILY?

Only Continental offers 6 dome-top aerosols ...sized to suit your every selling need

Here's a truly complete line of giant economy-size, medium-size and small-size containers—tailored to sell your product in its most convenient and appealing form. And because they let you fill all your container needs in one order, Continental dome-tops will shave your shipping and handling costs, too.

Let us start you off with up-to-the-minute deliveries of all the dome-top cans you need, lithographed to perfection by Continental craftsmen. Personalized engineering and research is available, plus contacts with valve suppliers and commercial fillers, if you wish. For the tops in dome-tops, and tailor-made service to match, call Continental soon.

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

NEW COLOR-SPRAY SIDE-STRIPING GIVES ALL-AROUND APPEAL

Now your aerosol package can look beautiful from any angle, with Continental's new color-striped side-seam. Another Continental "first", this special striping is sprayed on to match the background color of your lithographed design. Gone is that distracting gleam of solder, and the difficult job of paper labeling. Now available on Continental's 6-oz. dome-tops, color-spray side striping will be extended to other sizes in the near future.

TAILOR-MADE PACKAGE SERVICE

NEW Trade Marks

THE following trade marks were published in recent issues of the *Official Gazette* of the U. S. Patent Office in compliance with section 12 (a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of $25 must accompany notice of opposition.

Just—This for self-polishing finishes for wood, composition, asphalt, rubber, linoleum, and terrazzo floors. Filed June 10, 1954 by Fuld Brothers, Inc., Baltimore. Claims use since May 10, 1954.

scintillex—This for combined cleaner and polishing composition for precious, semi-precious, and artificial stones in jewelry. Filed Jan. 10, by Dan Cu Chemical Co., Oklahoma City, Okla. Claims use since Dec. 15, 1954.

Brite-Glo—This for combination cleaner and polisher for metal and glass surfaces. Filed Apr. 22, 1955 by Stanley H. Brown, doing business as Brite-Glo Products, Newark, O. Claims use since Apr. 5, 1955.

Der-Doh—This for furniture polish. Filed July 25, 1955 by Der-Doh Co., New York City. Claims use since Nov. 11, 1954.

Sani-Skuf—This for shoe polish. Filed Sept. 21, 1955 by Hollywood Shoe Polish, Inc., Richmond Hill, N.Y. Claims use since Dec. 5, 1954.

turtle wax—This for automobile polish. Filed Oct. 4, 1955 by Plastone Co., Chicago. Claims use since Jan. 5, 1955.

Insul Ease—This for liquid and paste cleaning and polishing materials for auto bodies. Filed Oct. 20, 1955 by Bardahl Oil Co., St. Louis. Claims use since May 18, 1955.

Radiant—This for sudsing cleaner, cleanser, and detergent. Filed Mar. 2, 1954 by Hewitt Soap Co., Dayton, O. Claims use since Jan. 22, 1954.

Encore—This for toilet soap and detergent preparations for cleaning glassware, china, silverware, and the like. Filed Mar. 24, 1954 by Industrial Soap Co., St. Louis. Claims use since Jan. 18, 1954.

Strike—This for compounds for sequential use in washing and disinfecting glassware, china, eating utensils, and the like. Filed Nov. 1, 1954 by George Stearns Chemical Co., Madison Wis. Claims use since May 11, 1954.

Swype—This for cleaning compound for toilet bowls, flush traps, and the like. Filed Mar. 7, 1955 by Acme Chemical Co., Milwaukee. Claims use since Nov. 23, 1928.

Lana—This for toilet and bath soap. Filed Sept. 7, 1955 by Hewitt Soap Co., Dayton. Claims use since Apr. 1, 1942.

McKay—This for soaps, cleaners, detergents, and solvents. Filed May 19, 1955 by Edward M. King, doing business as Mckay Mfg. Co., Los Angeles. Claims use since on or about Feb. 28, 1946.

Saks-Fifth Avenue—This for toilet soaps, bath soaps, and shampoos. Filed Oct. 4, 1955 by Saks & Co., New York City. Claims use since Sept. 15, 1924.

Boyer's—This for all purpose cleaner in powder form, and glass surface cleaner. Filed Oct. 24, 1955 by Boyer Chemical Co., Chicago. Claims use since Jan. 1, 1940.

"Speedster"—This for cleaner for deep fat fryers. Filed Nov. 7, 1955 by Miller and Carrell Mfg. Co., Denver. Claims use since on or about July 19, 1954.

Kleenosan N-8—This for liquid cleaner sanitizer for farm and dairy use. Filed Nov. 14, 1955 by Lazarus Laboratories, Inc., Buffalo, N. Y. Claims use since Sept. 23, 1955.

Enden—This for shampoo. Filed Jan. 6, 1956 by Helene Curtis Industries, Inc., Chicago. Claims use since Oct. 28, 1955.

MagicWipe—This for wiping and polishing cloths. Filed Mar. 21, 1955 by American Sanitary Wipers Co., Birmingham, Ala. Claims use since June 30, 1939.

Castaway Shave—This for disposable razor kit comprising a disposable razor, shaving cream, face soap and towel. Filed Oct. 31, 1955 by Rochester Razor, Inc., Rochester, N. Y. Claims use since Oct. 7, 1955.

Soilax—This for an all-purpose soap and detergent product. Filed Aug. 20, 1954 by Economics Laboratory, Inc., St. Paul, Minn. Claims use since Jan. 2, 1938.

dial—This for soap. Filed Mar. 29, 1955 by Armour and Co., Chicago. Claims use since June 1, 1948.

Reliable—This for paint, varnish and lacquer removers. Filed May 16, 1955 by Reliable Remover & Lacquer Corp., Long Island City, N. Y. Claims use since Jan. 6, 1925.

Ms—This for aluminum cleaning compound. Filed Aug. 5, 1955 by F. Mees and Son, St. Louis. Claims use since May 10, 1955.

Digit—This for industrial detergent primarily for use in connection with the cleaning of glass surfaces. Filed Oct. 20, 1955 by Clarkson Laboratories, Inc., Philadelphia. Claims use since in or about September 1954.

White King D—This for detergent in liquid form for household use. Filed Nov. 8, 1955 by Los Angeles Soap Co., Los Angeles. Claims use since Aug. 27, 1954.

Boost—This for synthetic detergent for use in laundering. Filed Nov. 25, 1955 by Safeway Stores, Inc., Oakland, Calif. Claims use since Aug. 31, 1955.

Merry Maid—This for composition for household and like uses in the cleaning of textile fabrics. Filed Nov. 28, 1955 by Ultra Chemical Works, Inc., Paterson, N. J. Claims use since Nov. 25, 1946.

Alli—This for liquid soap. Filed Feb. 6, 1956 by Lincoln Industrial Chemical Co., Reading, Pa. Claims use since Mar. 1, 1947.

Sturdy—This for synthetic detergent for use in laundering. Filed Dec. 1, 1955 by Safeway Stores, Inc., Oakland, Calif. Claims use since Aug. 31, 1955.

N D P - 29—This for alkaline cleaner having good detergency in hard water and organic soil, used for cleaning dairy and other food equipment and for general household cleaning. Filed June 24, 1955 by National Dairy Research Laboratories, Inc., Islip, N. Y. Claims use since Oct. 29, 1953.

Glo Glo—This for liquid glass and all-surface polish. Filed June 8, 1955 by Pyramid Chemical Co., Detroit. Claims use since July 1947.

Leather-Bryte—This for cleaning, polishing and preserving compound for leather, leatherette, and plastic upholstery and trim. Filed Dec. 12, 1955 by Shur-Gloss Mfg. Co., Chicago. Claims use since Nov. 25, 1955.

Ultra Chemical Works—This for floor waxes. Filed Dec. 13, 1955 by Ultra Chemical Works, Inc., Paterson, N. J. Claims use since Nov. 14, 1955.

Denti-Kiss — This for tooth paste. Filed Feb. 1, 1955 by Texize Chemicals, Inc., Greenville, S. C. Claims use since Jan. 12, 1955.

Sno-Flo—This for non-sudsing detergent. Filed June 8, 1955 by Tesco Chemicals, Inc., Atlanta. Ga. Claims use since in or about 1949.

Spree — This for household cleanser. Filed Oct. 24, 1955 by Colgate-Palmolive Co., Jersey City, N. J. Claims use since Apr. 27, 1955.

La Marick Spun Silk—This for shampoos. Filed Nov. 23, 1955 by La Marick Beauty Products, Inc., Charlotte, N. C. Claims use since Aug. 1, 1954.

Lifegard—This for rug and upholstery shampoo. Filed Nov. 23, 1955 by Rachlin Sales Co., Philadelphia. Claims use since Oct. 3, 1955.

Permag—This for cleaning compounds for cleaning machinery, building interiors and exteriors, railroad equipment, and cloth material. Filed Sept. 6, 1955 by Magnuson Products Corp., Brooklyn, N. Y. Claims use since Jan. 2, 1928.

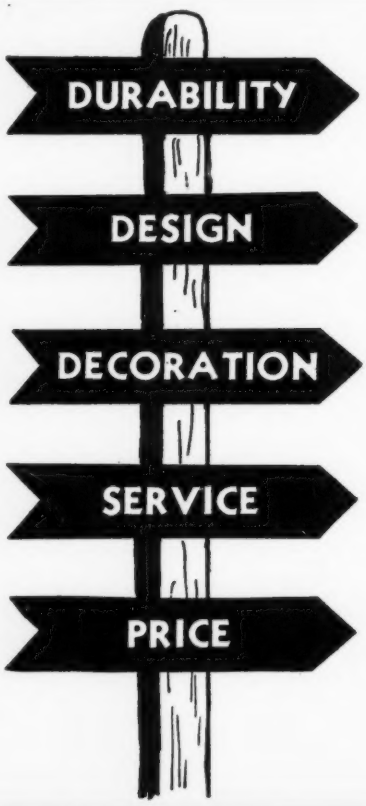
Nu Proco—This for preparation for degreasing, descaling, sludge removing, and the like. Filed June 20, 1955 by New Process Chemical Co., San Francisco. Claims use since August 1954.

Sipel—This for surface active agents. Filed Nov. 2, 1955 by American Alcolac Corp., Baltimore. Claims use since Feb. 2, 1955.

Germi-Cedar—This for concentrated preparation for bacteria and fungicide control. Filed Nov. 21, 1955 by Bernard C. Smith, doing business as Germi-Cedar Mfg. Co., Atlanta, Ga. Claims use since on or about Jan. 1, 1954.

Vano—This for laundry starch and clothing and household bleach in both liquid and powder form. Filed Dec. 12, 1955 by Chemicals, Inc., San Francisco. Claims use since Jan. 7, 1946, on starch.

Chex-Slip—This for floor wax. Filed Nov. 28, 1955 by Western Chemical Co., St. Joseph, Mo. Claims use since Feb. 1, 1950.



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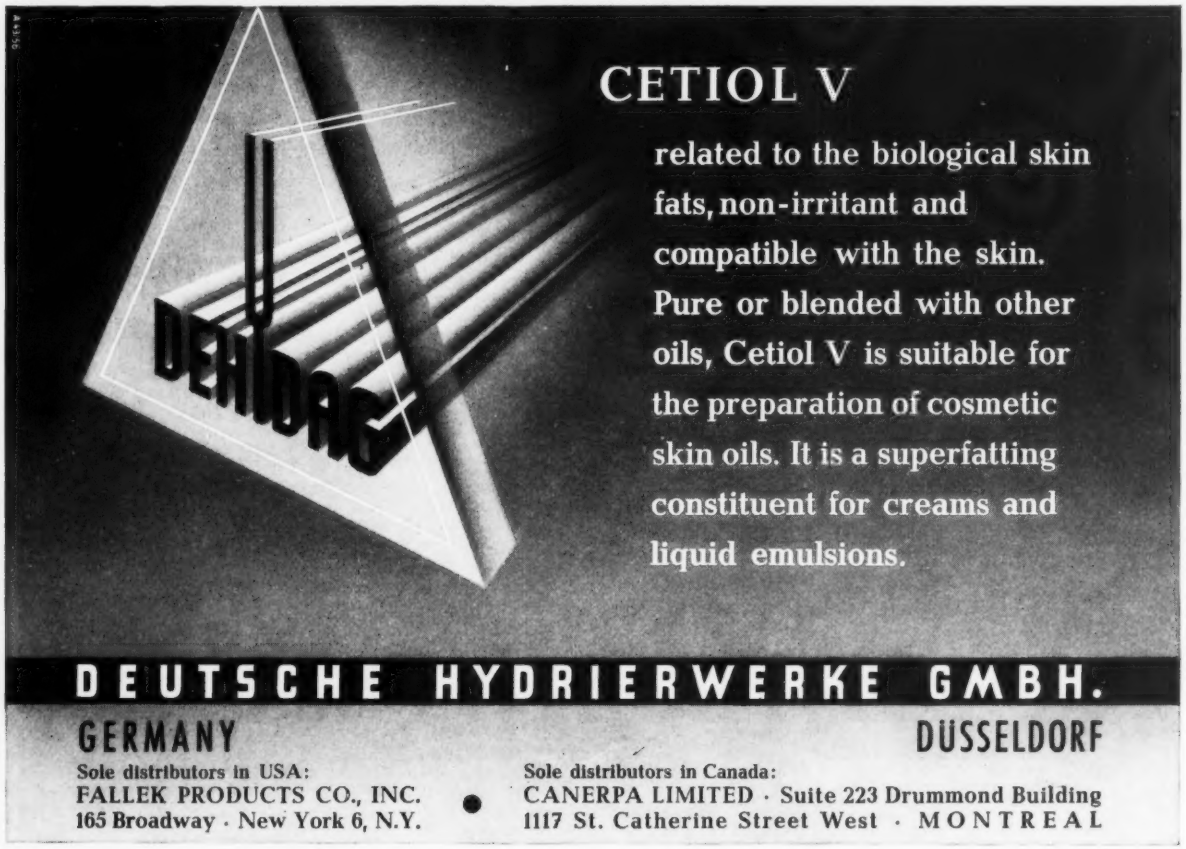

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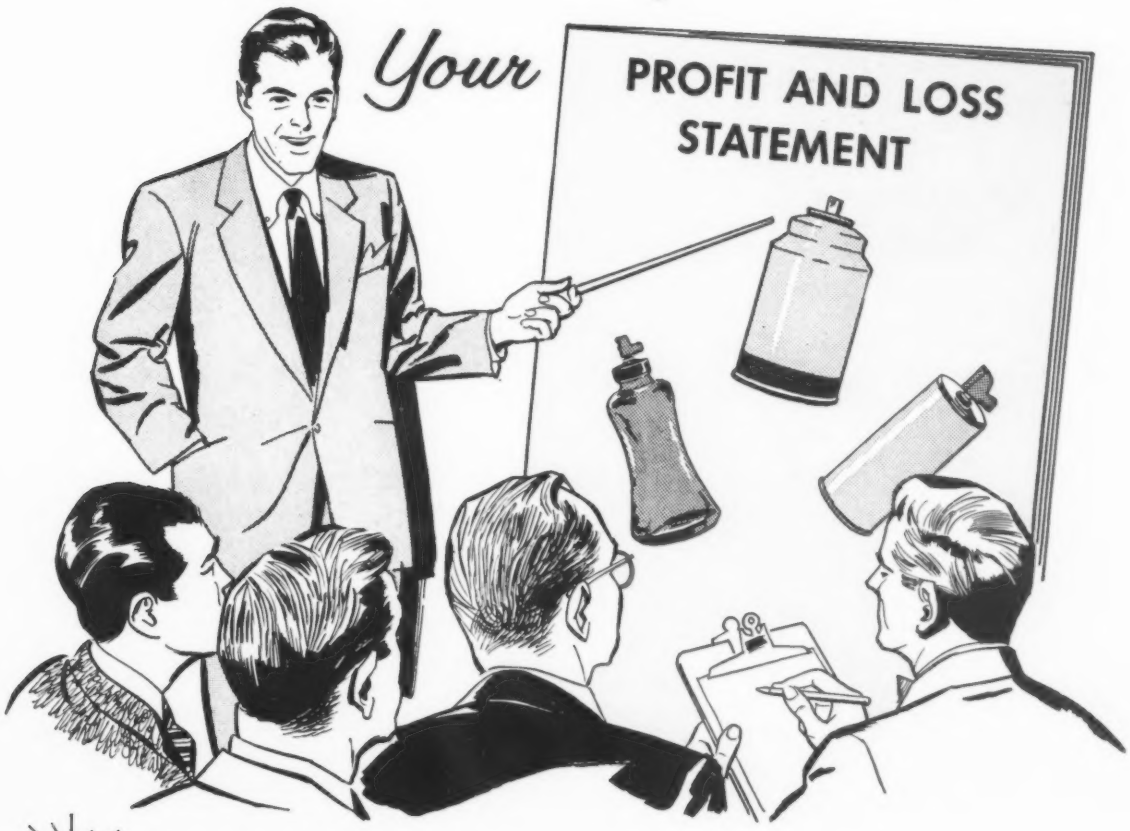

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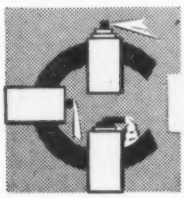

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WITH pharmaceutical, antibiotics and other medicinal products just around the aerosol corner, loaders might be well advised to take a second look at their housekeeping practices and inventory record keeping.

Federal Food & Drug Administration inspectors, in case you aren't aware of it, can drop in at your plant, unannounced, at any time during regular business hours to check on plant cleanliness and handling of drugs under their jurisdiction . . . can also legally demand the right to inspect your records on inventory, quality and process control of drug products and ingredients, or take samples of your drug products for analysis as to purity and quality.

When you're involved in products affecting the public health, it's better to be safe than sorry. Know the regulations, comply with them scrupulously, and you have no cause for worry. Become careless and you could find some or all of your inventory condemned or a padlock installed on your premises . . . with the key in the government's possession.

What reminded us of this was a recent issue of "FDC Reports – The Pink Sheet" of *Drug and Cosmetics*, which listed several dozen cases in which FDA had seized the production of various manufacturers because of improper label claims, low potency of ingredients, deterioration of ingredients, and insufficient directions for use. Even more shocking were seizures of products because they contained filth such as hairs, straw, glass fragments . . . even dead insects and mouse dirt.

First official government figures we have seen on aerosol sales were released recently by the Bureau of the Census, U. S. Department of Commerce, who said that preliminary figures obtained in its 1954 census of soap and glycerine manufactures indicated the aerosol shaving cream market that year to be $17.4 *million at the manufacturers' level.*

In comparison, the 1954 output of shaving preparations in tubes and jars was put at $6.8 million. Stick, powder, and cake shaving preparations were valued at $3 million. Those figures represented a drop of about 32 and 44 percent, respectively, since 1947 . . . several years before the first aerosol shave creams appeared on the market.

* * *

Do It Yourself

AT LEAST four marketers of aerosol products were represented among exhibitors at the week-long You Do It show in Los Angeles' Pan Pacific Auditorium in July.

Robert J. Kerr Chemicals, Inc., of Park Ridge, Ill., had a display of their aerosol paints and "Odor Action" aerosol fish lure coating in the General Paint Company exhibit. Flamemaster Chemicals, Inc. of Culver City, Calif., showed their #5 aerosol product for flameproofing wood and #7 for flameproofing cloth, along with "Metaltone" aerosol hammer finish paints.

Olympic Paint & Varnish Co. of Los Angeles exhibited its "Syn-co-lite" aerosol enamel, while Sunglaze Company, Inc., also of Los Angeles, was pushing its "Sunglaze" aerosol protective finish for painted surfaces. Capitalizing on the West Coast craze for foreign cars, Sunglaze rolled an MG into their booth and demonstrated their product on it.

Sherwin-Williams Co., New York, we are told, is about ready to expand their aerosol paint line in the near future . . . put a big nationwide promotional push behind the products they've been marketing in a small way for the last year.

Rumor . . . another of the large eastern chemical manufacturers is toying with the idea of entering the propellant field with a line of fluorinated hydrocarbons . . . already has sounded out several loaders in the East and Midwest. Du Pont and General Chemical, only current manufacturers of the fluorinated hydrocarbons, said as recently as six months ago that their plant capacities were sufficient to meet the long term needs of the aerosol business. And shortly after those statements, Pennsalt announced its entry into the propellant field, with production from a new plant at Calvert City, Ky., expected to enter supply lines early in 1957. Either current manufacturers have underestimated the future market or there's an overabundance of confidence that present propellant manufacturers' share of the business can be whittled away.

All three major aerosol can manufacturers say the month and a half steel strike, settled early in August, has had no serious effect on the supply of containers for aerosol products.

Insecticide sales seem spotty nationwide . . . unseasonably cool weather in late spring failed to produce the usual big crop of bugs and the rainy weather and relatively low temperatures since then haven't helped. Some large marketers say they expect a large carryover of this year's insecticide stocks . . . others say the reverse. Only the end-of-the-season tote will tell.

Continental Can now is offering their containers with a painted side seam to blend in with the rest of the can label . . . possibly rebutting one of the sales arguments of Can Division of Crown Cork & Seal, whose seamless "Spraytainer" cans have capitalized on their adaptability to all-around lithography.

Pack-It Expands

Pack-It, Newark, N. J., a contract packaging concern, has moved its offices to a new location at 222 Pacific Street, it was announced recently. The new plant includes three main buildings with a total floor space of 70,000 square feet, occupying three acres. It is served by two railroad sidings, capable of handling up to ten cars. There is also a shed area that includes four storage buildings. The three main buildings will be utilized to package household and industrial chemicals, pharmaceuticals and toiletries, and garden supplies.

★

New Automatic Filler

"Fillmaster," a new automatic filling machine, was introduced recently by Stuyvesant Engineering Co., Lyndhurst, N. J. Designed to package hard-to-flow or semi-dry products into rigid containers at speeds up to 300 per minute, the machine requires one operator whose job is limited to placing empty containers on the conveyer belt. The conveyer carries the empties to the automatic stop under the mouths of the double-joined hopper, where two containers are filled simultaneously. Filled containers are then moved along to the end of the conveyer, ready to be hand-capped. At that point a special slow-down device facilitates the insertion of circulars and recipes, etc.

★

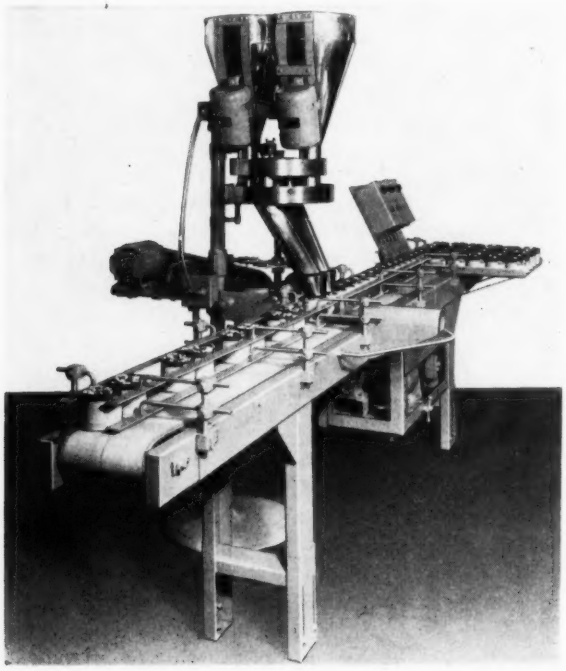
Box Sealing Booklet

A new two-page bulletin describing automatic box sealing operations, has been issued by Philadelphia Quartz Co., Philadelphia, it was announced recently. The booklet gives detailed explanations of the principles of silicate adhesion, proper silicates and how they are applied on automatic sealers. Mechanical aspects of automatic box sealing are also described. The bulletin is suitable for filing in an 8½ x 11" three-ring binder. Copies are available upon request.

★

In New O-I Posts

Three appointments in the glass container division of Owens-Illinois Glass Co., Toledo, were announced last month. Richard A. Cosh was named general manager and also appointed to the company's planning and executive research committees. Miles G. Beishline has been named factories manager while Eliot Marr succeeds him as division vice-president and production manager.



New "Fillmaster" automatic filling machine of Stuyvesant Engineering Co., Lyndhurst, N. J.

Continental Sells Plant

Continental Can Co., New York, has sold its paper fibre container plant in Midland, Mich., and has leased it back for a twenty-five year term with option renewals, it was announced recently. Financing for the deal was made by D. Edwin O'Neil, vice-president of Cushman & Wakefield, through Norman Barnes, Inc., Chicago. The plant is on a thirty-acre tract and cost about $1,500,000.

★

Rheem Names Two Reps.

The appointment of William R. Dickinson and R. L. Worrell as company representatives of Rheem Manufacturing Co., Chicago, were announced recently by A. W. Nides, sales manager of the central region. Mr. Dickinson has been named resident representative in Kansas City, Mo., while Mr. Worrell has been appointed sales representative for the St. Louis area. Mr. Dickinson's territory includes Kansas, Nebraska, Iowa and South Dakota. He had previously been employed in the firm's container division in Chicago. Mr. Worrell, associated with industrial packaging for 25 years, rejoined Rheem last November after having left the firm 10 years earlier. Prior to that he was employed in Rheem's Chicago office for 15 years.

★

Packaging Short Course

A short course in "Protective Packaging and Materials" will be given under the direction of the University of St. Louis and the sponsorship of the Society of Industrial Packaging and Materials Handling Engineers, Chicago, Oct. 22 to 25, in Kiel Auditorium, St. Louis.

The course's 26 sessions will be held in the morning so as not to conflict with the SIPMHE's 11th annual protective packaging and materials handling exposition also scheduled for the auditorium. The course will consist of three main divisions, including protective packaging. A special session will be also devoted to salemenship in protective packaging.

Chemical Specialties

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FOR over 40 years, top firms in the chemical specialties industry have been active in CSMA affairs. Large or small, they find that active participation in their trade association keeps them closely and promptly informed on matters of deep interest and importance. They find that exchange of views in open meetings can aid in solving many of their own individual manufacturing and marketing problems. They find that the prompt and complete bulletin service of CSMA keeps them abreast of matters vital to their business — on what lies ahead and what is being done about it.

If you are in the field of disinfectants, deodorants, insecticides, floor waxes, polishes, soap and detergent specialties, aerosol products, automotive chemicals, or other chemical specialties, it could pay you to look into the advantages of membership in the CSMA for your firm. Can we send you further information?

H. W. Hamilton, Secretary.

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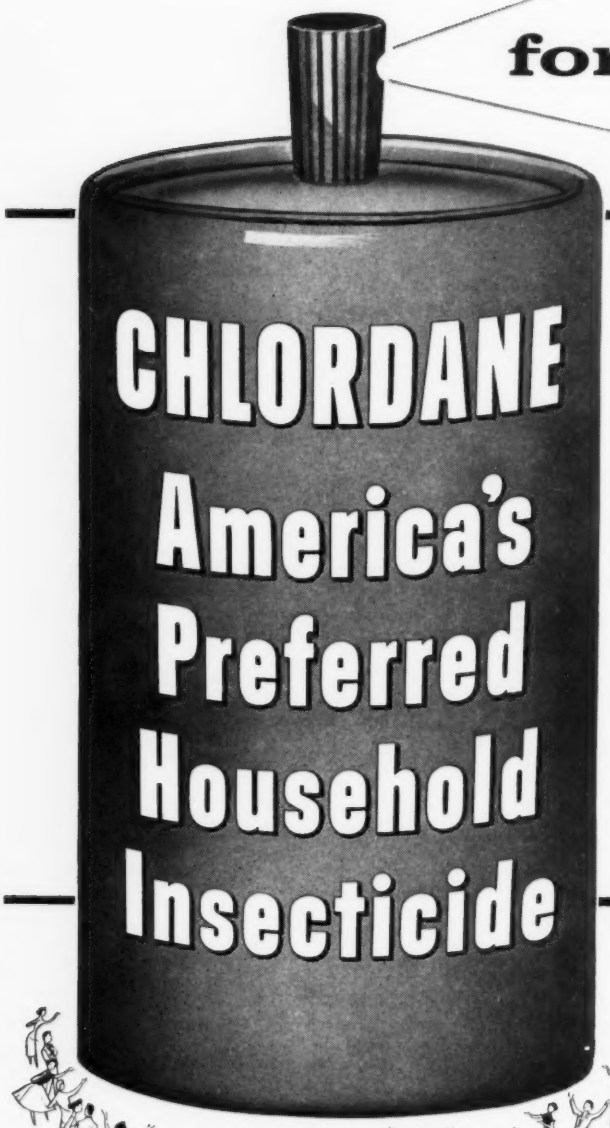

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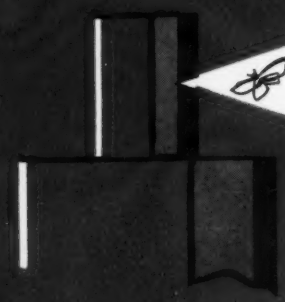

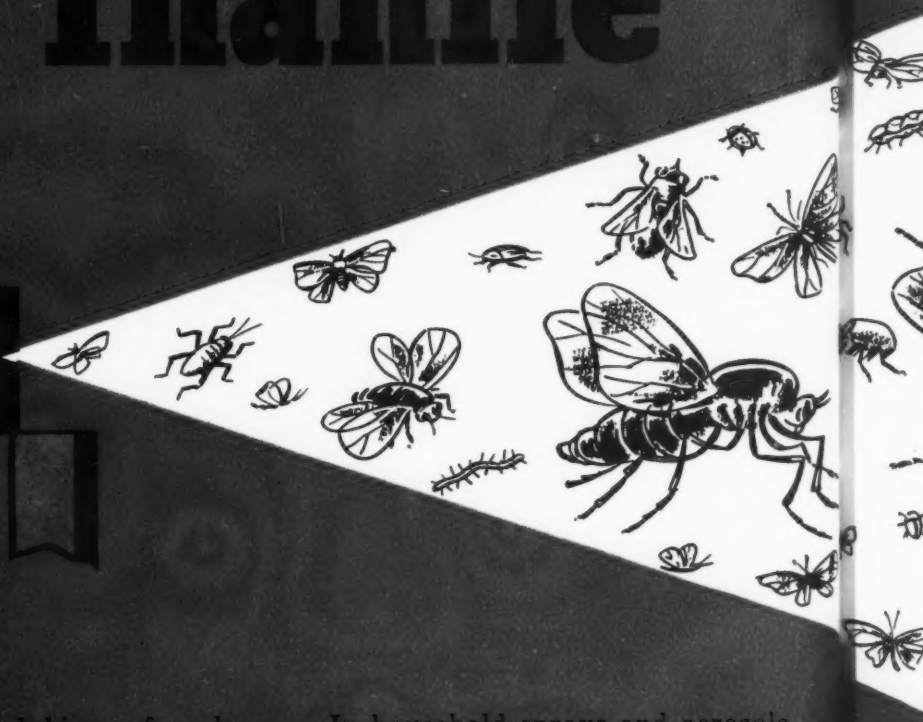

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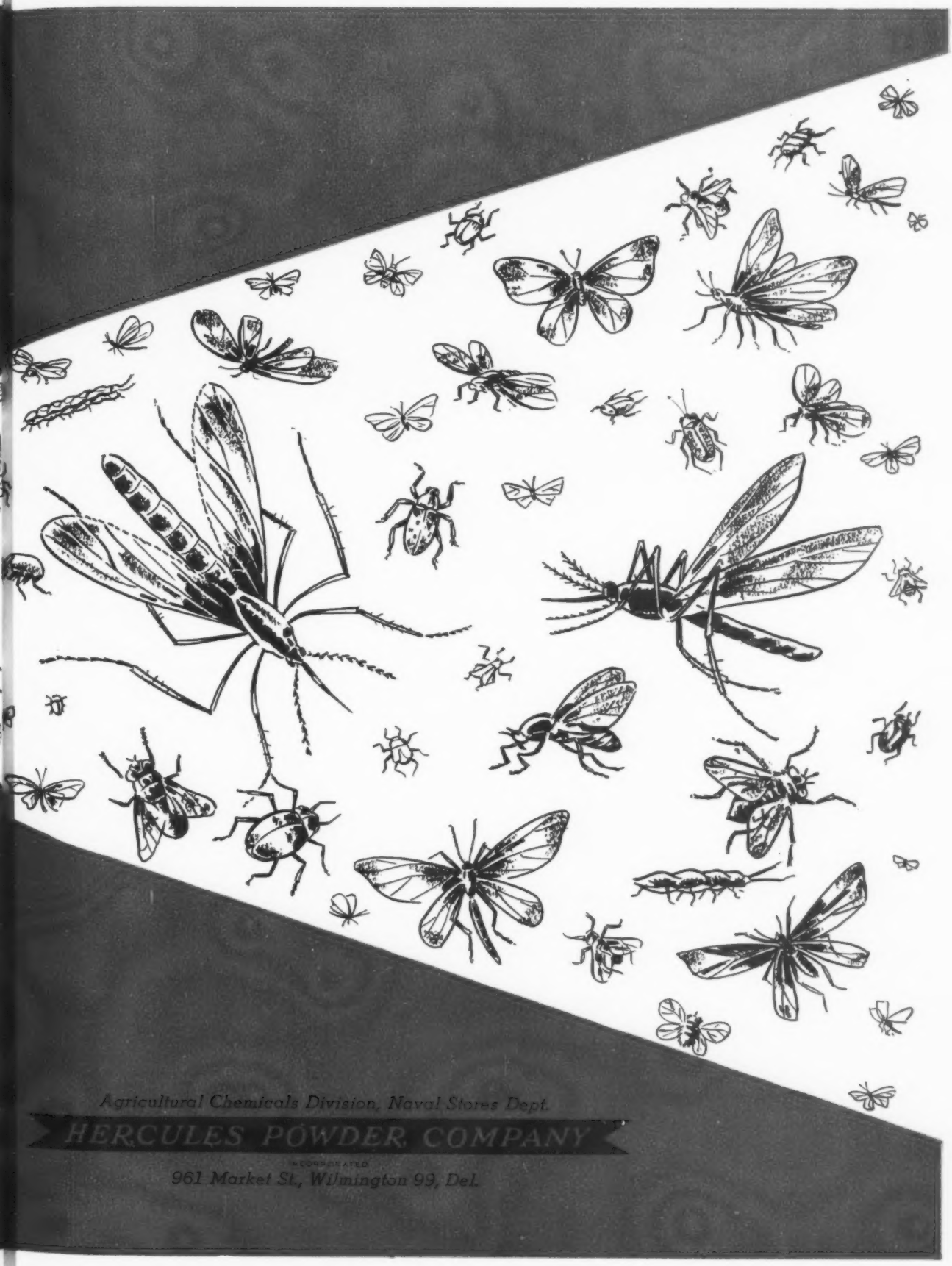
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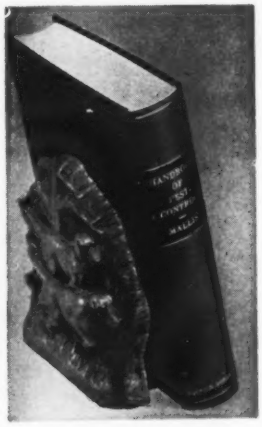
...about insecticides

HANDBOOK OF PEST CONTROL

by Arnold Mallis



THIS new HANDBOOK of PEST CONTROL by Arnold Mallis, is a completely revised edition, containing more than 200 illustrations — a much larger and more complete volume than the original HANDBOOK by Mallis, published in 1945 and out of print since 1948.

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▲ The new HANDBOOK of PEST CONTROL by Arnold Mallis measures six by nine inches, has a sturdy binding in green cloth, gold stamped. The book comprises twenty-five chapters, running to a total of 1068 pages and is printed on durable, long-lasting paper.

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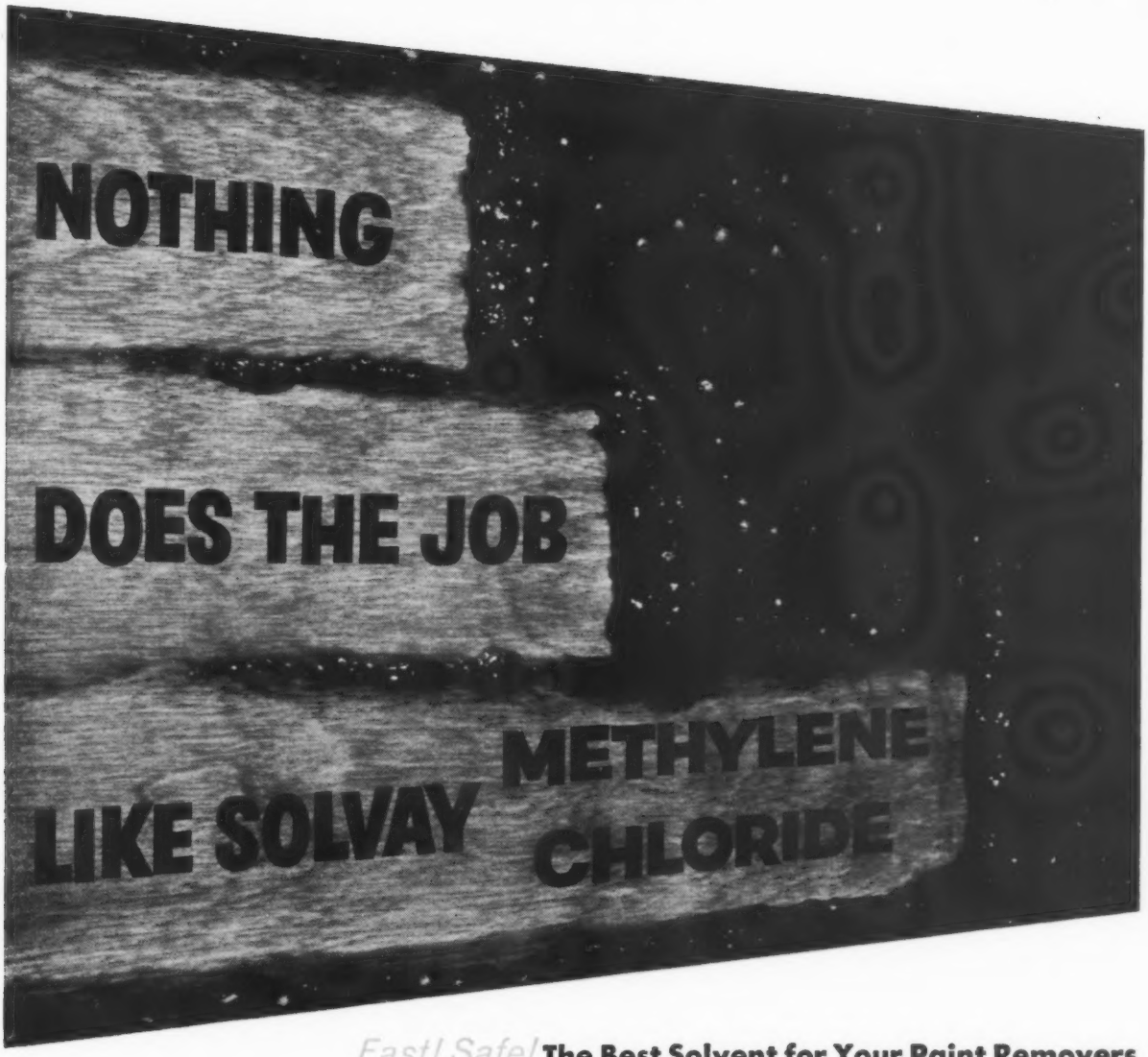

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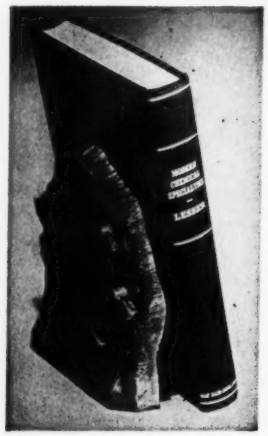
DM-9

...about chemical specialties



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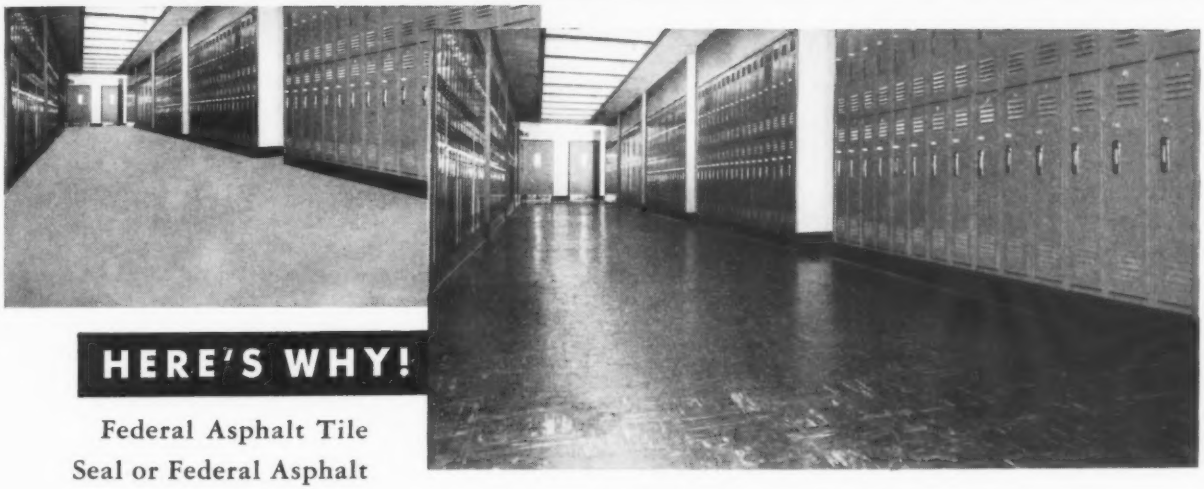

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☐ **Economical** — Both in initial application (covers from 700 to 800 sq. ft. per gallon) and in maintenance, these products permit worthwhile savings. Damp mopping and an occasional buffing keep a brilliant high luster.

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NOTICE!

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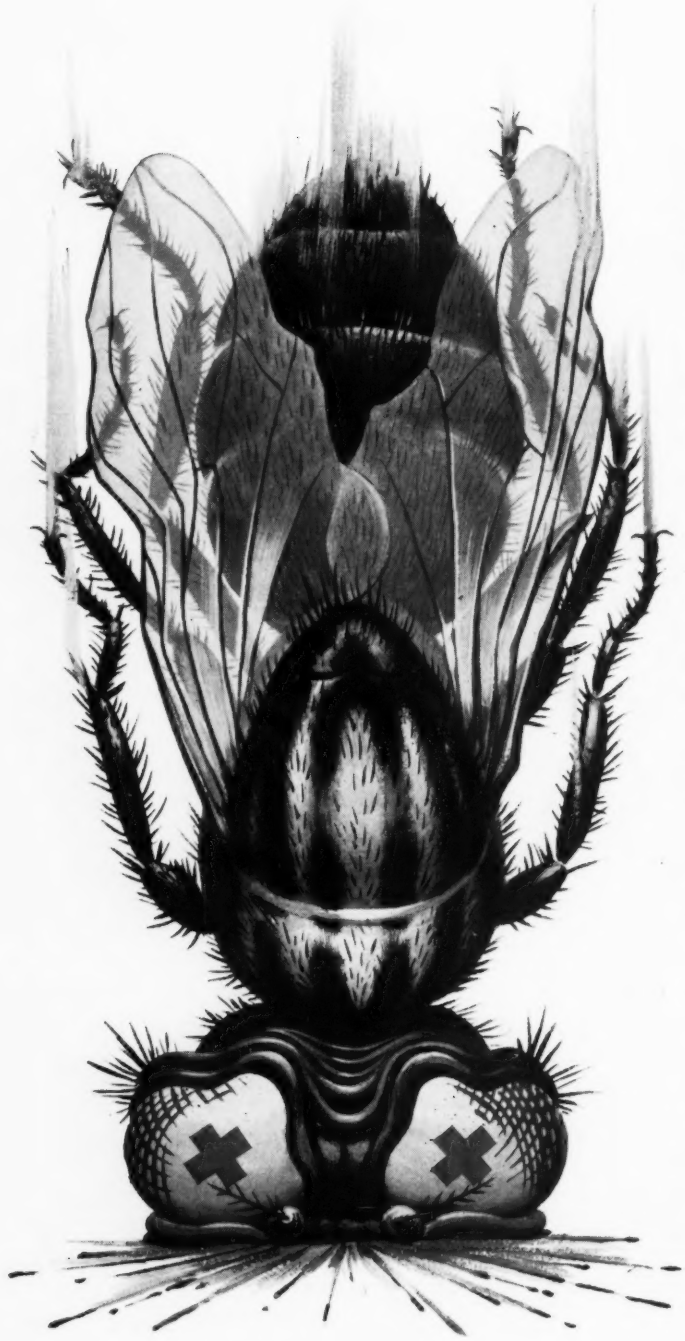

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Automatic measurement of

AEROSOL PARTICLES

By Sidney Katz, M. A. Fisher and A. Lieberman*

Armour Research Foundation,
Chicago

THE subject matter of this paper had its genesis in the studies of the German physicist, Gustave Mie, who published in 1907 a complete analysis based on electromagnetic theory of the interaction of light with particulate matter. The problem was difficult, and his solution was, and is, so complex, that for a number of years it remained a scientific generalization of little or no applied value.

With the advent of the very fast electronic computers of the past two decades, it has been found possible to reduce years of computation to a few hours' work and, in the past fifteen years, Mie's work is beginning to receive recognition and understanding.

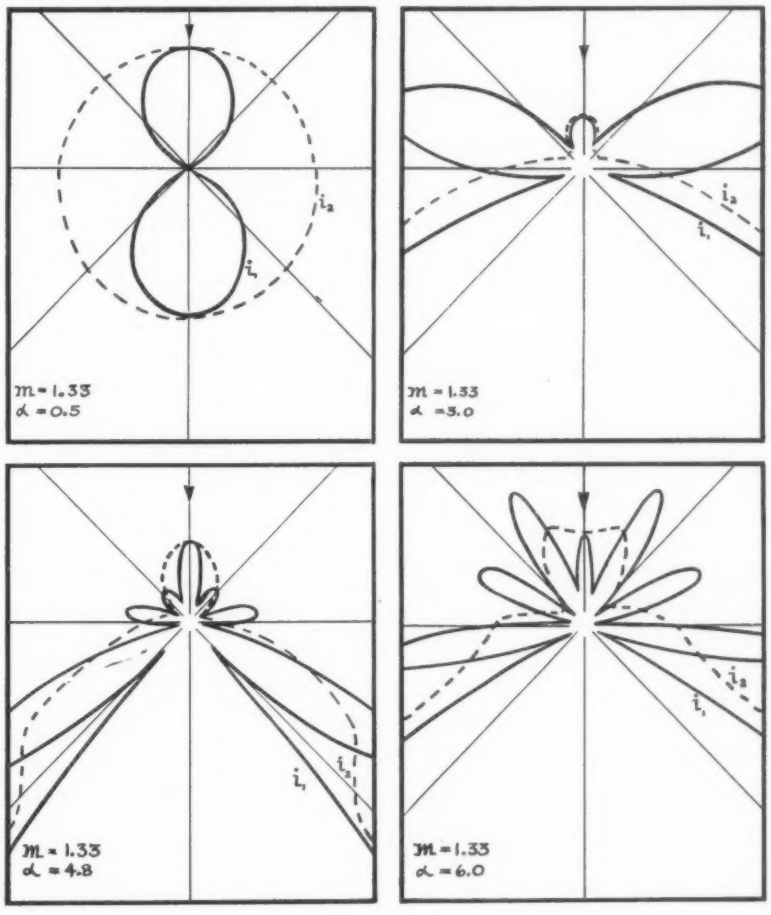
Basically, he showed that when light falls on particulate matter whose size is approximately equal to the wavelength of the light, the light is not reflected in the classical sense, but rather undergoes an experience which we call "scattering". Figure 1 shows the scatter of light by a single water droplet of progressively greater diameter (0.15, 1, 1.5, and 2 μ) for green light. This is the phenomenon on which the present work is based.

In the field of particulate measurement the problem of size determination presents an infinite number of facets, each one reflecting the interests of the particular worker.

The bacteriologist is interested in viable organisms, usually of uniform size but often of peculiar shape. The air pollution man is concerned with a host of materials of widely varying sizes, shapes and compositions. Cigarette smoke, on the other hand, consists of globular particles of almost unbelievably high concentrations. Fuel sprays usually involve particles over a fairly wide range of sizes, and frequently, of very low stability.

The field of interest to those concerned with aerosols involves particles generated by spray ejection in a volatile vehicle. A great range of materials is possible, sizes may vary widely and the suspended matter may be liquid or solid, spherical or irregular in shape. The measurement of the sizes and concentrations of such an array presents a challenge of no slight magnitude and I hope the following

Fig. 1. Radical distribution of intensity of light scattered by spherical particles.



*Paper presented before the Aerosol Division during the 42nd midyear meeting of the Chemical Specialties Manufacturers Association, Chicago, May 22, 1956.

observations do not appear to minimize the problem.

It should be understood that I make no attempt to discuss aerosol formation. The interrelation of the aerosol unit's pressure, the nozzle design, and the carrier vehicle composition is a complex and, as yet, only imperfectly understood field of study. The ultimate evaluation of the efficiency with which the ejected material is reduced to airborne particulates, is performed by the measurement of the number and size range of these particles. We always use the term size range in discussing aerosols, because no commercial generator of practical design makes aerosol particles of uniform size. The laws of probability point to the application of certain well-known principles governing the size range. We may represent the size distribution of our aerosol by means of a log normal probability curve. (Figure 2). In this case, each point indicates the total number of particles less than the indicated size. We see at a glance that the median value, the size at the exact center of distribution is given at the 50 per cent point. There are other useful deductions which cannot be discussed at this point.

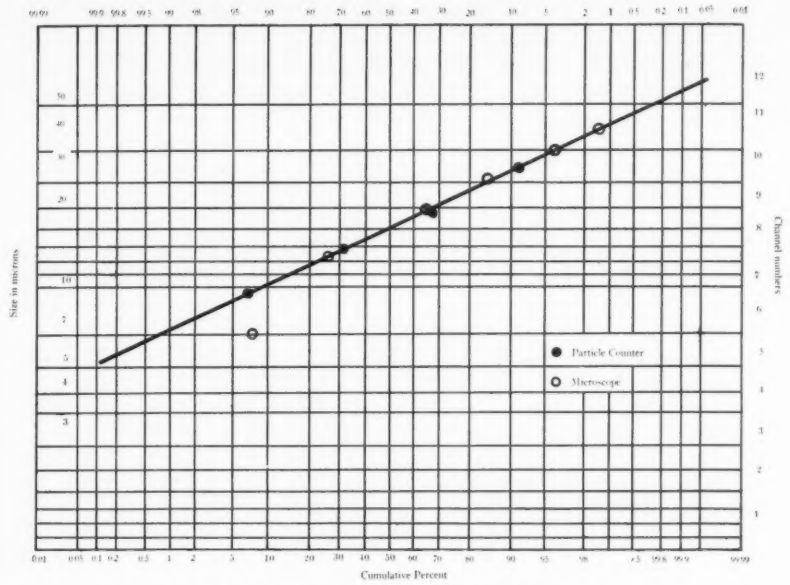


Fig. 2. Aerosol particle size distribution.

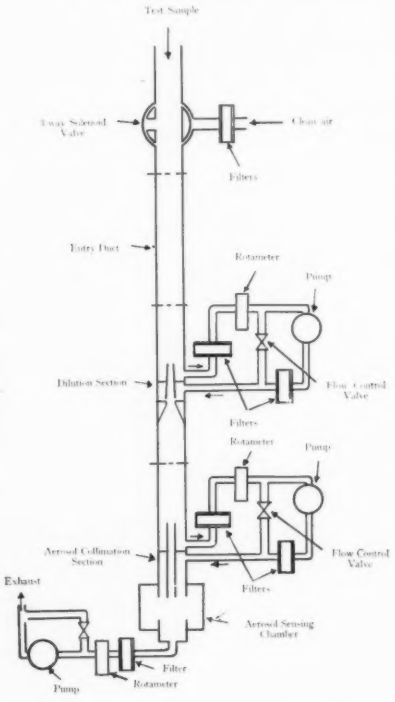
Particle Counting Need

THE primary method of particle counting is known to all. A sample of the aerosol is collected on a slide and the particles are counted under a microscope. If the particles may be collected without distortion and counted without alteration by a microscopist who can function with competence and without personal bias, then a reliable count will result, provided of course, that the sample is representative. The elimination of all these "ifs" and "buts" has led to a number of studies of methods of objective particle counting.

An ideal counting method should include a means of detection that does not distort the particles, that responds to both size and particle number and is sufficiently rapid to conduct the measurement before the particle can undergo appreciable alteration. Very rapid counting has the further advantage of allowing the use of a very large sample. It would be very desirable if the instrument's response were indifferent to varying compositions; this may be a difficulty of greater magnitude than some of the other problems.

Many different approaches exist to the solution of the problem. I shall refer to two. One, which has been especially popular in England, and has had a degree of success in this country involves collecting the particles on a suitable surface which is then scanned, television tube style, by a beam which records both size and number of particles. The actual counting procedure is often very fast, requiring only fractions of a second, and is very accurate. Another method involves drawing a representative sample of the aerosol through a detector system and counting the particles as they flow past a reference point. This is the type of counter of most interest here and the rest of my paper will be a discussion of the device developed on this principle in our laboratories.

Fig. 3. Aerosol control section.



A detection system which does not depend on collection for operation eliminates particle distortion by impact or breakup. Alteration by evaporation may be controlled to a degree by rapid operation and by control of the aerosol atmosphere. In our device the aerosol may be generated either in an open space or in a chamber, depending on the condition of aerosol formation desired. Figure 3 shows the arrangement of our aerosol control system. The aerosol is

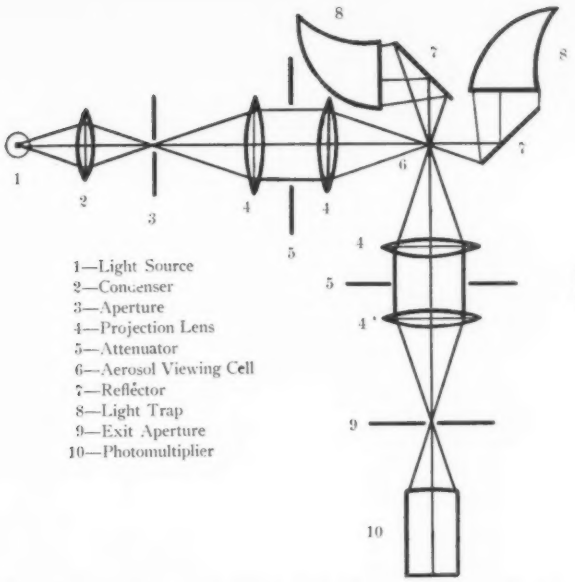


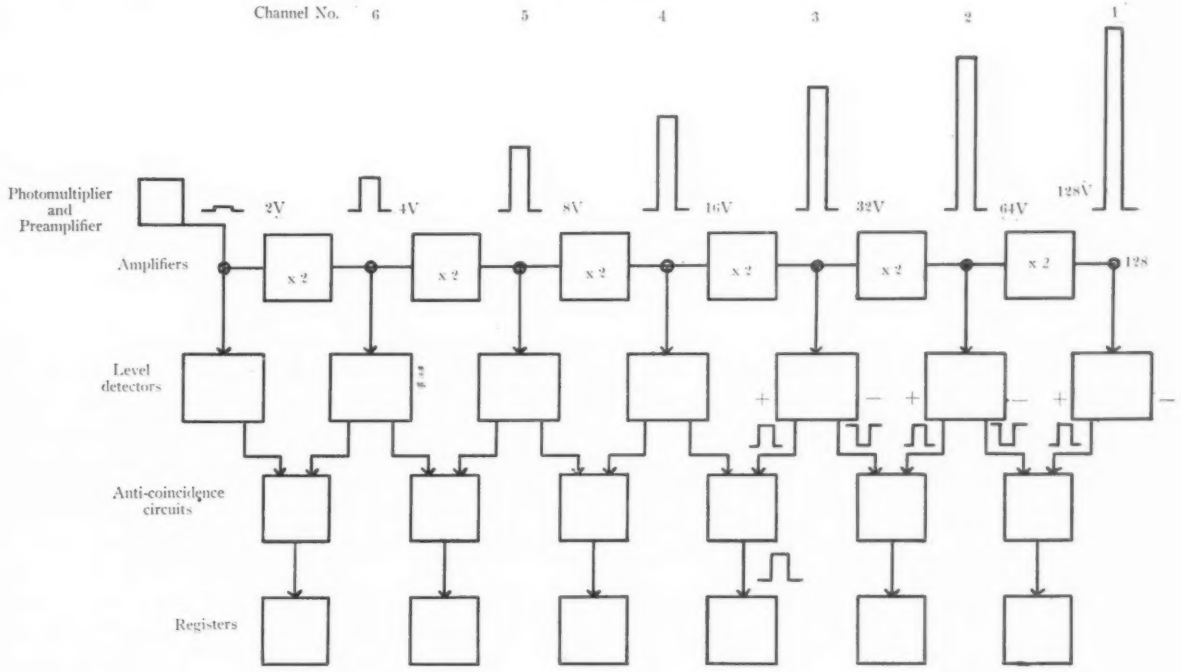
Fig. 4. Optical system (schematic).

drawn into the entry port through a solenoid operated plug valve with which the aerosol flow may be timed. If the aerosol is too concentrated it may need dilution. This is provided by the indicated device which reduces the aerosol concentration to 1/11 of the original. If the diluter is not needed, it may be omitted. The aerosol then flows into the collimation section, where a selected fraction is caused to flow down the central tube while the balance of the aerosol is bypassed through a filter and the clean air forms an annular sheath around the aerosol as it flows down through the detection region and out to exhaust. At this point the aerosol stream is three mm in diameter, and is travelling at about 11 feet per second. The whole entry section is about two feet long, so the aerosol sample has been absent from the main body just under 1/5th of a second.

Detection is by means of an optical system mounted at right angles to the aerosol stream as shown in Figure 4. A very intense ribbon filament tungsten lamp is focused on a slit about one mm square and the slit in turn is imaged at the intersection of the light beam and the aerosol stream. Here we take advantage of a useful property of minute particulate matter, the ability to "scatter" light in all directions. To a good approximation, this scattering is proportional to the square of the particle diameter. It is therefore possible to set up a detection system to respond to the light scattered by the particle.

As can be seen, our detection system collects the light scattered at right angles to the incident light. Stray light elimination is greatly simplified by this arrangement. The two identical optical systems intersect at the aerosol stream to define a detection volume one mm high and almost one mm square. Only the particles passing through this volume are counted. Since the aerosol is travelling at 11 feet per second, each particle is present in the detection region for about 300 microseconds. At this speed, and at our

Fig. 5. Electrical system—simplified block diagram.



working concentration, particles are counted individually.

The 90° component of the scattered light is collected by the photo-multiplier and analyzed electrically. The principle of operation of the electronic system is shown in Figure 5. The signal leaving the photo-multiplier passes through a series of six consecutive amplifiers, each of which amplifies the signal by a constant factor. For a factor of 2, for example, a signal of say two volts will be elevated to four, eight, sixteen, thirty-two, sixty-four and one-hundred-twenty-eight volts. Between each pair of amplifiers is a level detector, preset to respond to a 20 volt signal. Each triggered level detector passes a pair of pulses of equal voltage but opposite sign, one to each of two anti-coincidence circuits, associated with the channels on either side of the level detector. Thus all signals are nullified in the anti-coincidence circuit except the one corresponding to the first channel in which the signal exceeded 20 volts. The signal is transferred to a register system which records the pulse on a glow transfer tube.

The speed of the instrument is limited by the response of the register system, to 200 counts/sec, or, if you wish, 360,000 counts in ½ hour, a speed appreciably faster than our best visual microscopist. The nominal range is one to 64 microns. I shall refer to the size range again.

The instrument is shown in Figure 6. The aerosol flow system is housed in the cabinet on the right. The optical components are in the tubular section, wrapped around the aerosol cabinet. The aerosol enters by way of the vertical stack on the right. The electronic components are contained in the cabinet on the right.

We have built two instruments of an earlier design which are in use by the Army Chemical Corps. A third instrument, similar to the one discussed here, has been delivered to the Air Force. The Chemical Corps instruments were subjected to exhaustive comparison tests against other so-called "standard" methods. Most of the test aerosols were sprays of all sizes from a micron up to 50 or 60 microns. The tests employed both water and various organic liquids. Other comparisons were made with as varied a range of materials as air filter test dust, spores, glass microspheres, iron powder, and smokes. The Air Force instrument has been used almost exclusively for water droplet studies and cloud structure analysis. In spite of its nominal rating of one to 60 microns, the agency using it claims it has detected particles in sizes down to 0.2 microns. It has also been used on supercooled water droplets at temperatures down to −20°C (4°F). This range of operations would appear to anticipate many of the ordinary needs of the aerosol manufacturing industry.

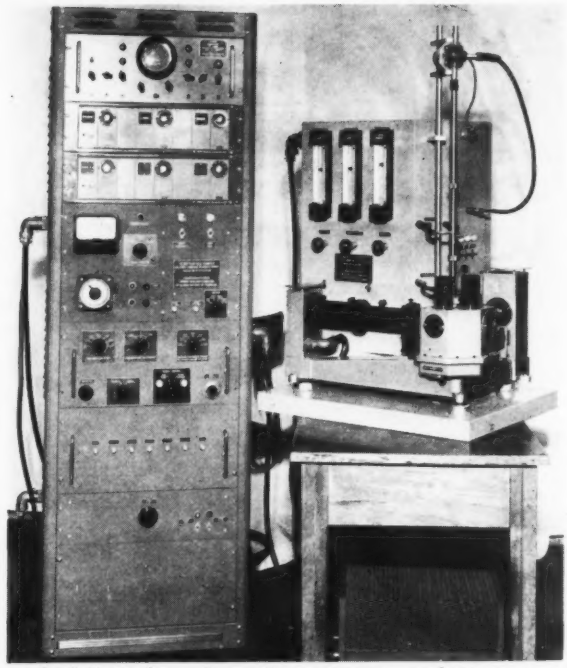


Fig. 6. Cloud particle counter.

In conclusion comment might be in order on the general impact of newer and more efficient methods on existing technologies. The effect of electronic computer methods on light scattering theory was a good illustration. There is something similar here, in that a whole series of measurements are available which were not formerly accessible. It is now possible to study the newly formed aerosol within seconds after its emergence from the generator, and we can correlate the dissemination mechanism with the instantaneous particulate structure. It is possible also to plot the life history of the aerosol, following its growth and decay as large particles settle out, volatile fractions evaporate, intermediate particles coalesce, and lesser fragments diffuse away until the aerosol is fully dissipated.

★

New Monsanto Warehouse

Monsanto Chemical Co., St. Louis, announced last month, occupancy of its new office and warehouse, 6670 East Flotilla St., Los Angeles. The new structure will serve as a distribution center for all marketing activities in the southern California area.

The new, one-story building, consisting of 60,000 square feet of space, contains 6,000 feet of air-conditioned office space to accomodate district sales representatives for the company's organic, inorganic, plastics and consumer products divisions. The warehouse has complete rail and truck facilities, including special storage areas to accomodate any product which may require unusual temperature, humidity or other conditions. Parking facilities for employees and customers also are included.

Role of emulsifiable polyethylene

Polymer in Floor Waxes

By Robert E. Clark*
Semet-Solvay Petrochemical Division
Allied Chemical & Dye Corp.
New York

POLISH makers are constantly seeking new raw materials that promote hardness, increase gloss, provide ease both of buffability and formulation, and are readily available at stable prices. An emulsifiable, low molecular weight polymer that provides many of these desired characteristics is now available in commercial quantities from Semet-Solvay Petrochemical Division of Allied Chemical & Dye Corp., New York.

The new polymer, "A-C Polyethylene," is designed to give polish formulations based on it: durability, high gloss, toughness without tendency toward brittleness, some non-slip properties, emulsion stability, ample supplies at prices not subject to wide fluctuation. Properties one, two, four and five are imparted to water emulsion type films by the new polymer, which improves flexibility, polishability or buffability, and wet traffic resistance of high resin floor polishes.

Being a manufactured or synthetic product, the supply, quality and price of "A-C Polyethylene" are not dependent on the whimseys of nature. A special manufacturing process has been developed by Allied Chemical to insure the purity of the end product. No heavy metal or ash-forming material is used as a catalyst.

The color stability of "A-C Polyethylene 629" is indicated in Table I.

Table I.
Color and Heat Stability.

Temp. °C	Exposure Time, hrs.	Color* NPA	Description
140	Initial	<1	White
140	6	1½	Cream
180	6	2½	Tan

* ASTM-D-155.

In behavior at melting point this polymer is intermediate between the vegetable and mineral waxes and the thermoplastic resins. A definite melting point temperature may be observed, but the value depends on how the measurement is made.

In the specifications, the time-temperature plot of ASTM D87 is used. The melting point of various samples of "A-C Polyethylene 629" will range from 98° C. to 100° C., although the temperature plateau may not be as long as prescribed by this method.

Using ASTM D127, the drop point is observed as 100-103° C. for "A-C Polyethylene 629."

For many purposes the ball and ring method of determining melting point is the most meaningful. Following ASTM E28, the temperature for "A-C Polyethylene 629" is observed as 101-105° C.

The method used by most chemists for pure compounds may be used, but the value observed to a large extent will be a function of the rate of heating and stirring the bath. Values for the melting point will vary from 97°-102° C. for "A-C Polyethylene 629."

Some rather striking differences exist between the emulsifiable polymer and the vegetable, mineral and synthetic waxes commonly used in polish formulations. The higher viscosity and impact strength of the polymer are believed to be related to film flexibility and the tough, long wearing properties observed in polishes containing them. In addition, emulsifiable "A-C Polyethylene" is relatively hard. A typical sample of the measurements of

New emulsifiable polyethylene polymer gives floor waxes based on it durability, high gloss, toughness without tendency toward brittleness, some slip-resistance properties and emulsion stability.

* Paper presented during 42nd midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 21, 1956.

these properties appears in Table II.

Emulsifiable "A-C Polyethylene" is compatible with a wide variety of materials including animal and vegetable waxes, mineral and synthetic waxes, modified mineral waxes, oil soluble resins, fatty acids, waxy ketones, alcohols, amines, chlorinated waxes, oils, etc. Many materials incompatible as hot melts can be emulsified or dissolved separately and then combined with emulsions of "A-C Polyethylene." Generally, high molecular weight resins and "A-C Polyethylene 629" are combined in this manner.

The acid number of "A-C Polyethylene 629" was chosen to establish a standard degree of emulsifiability for optimum product quality.

Emulsifiable "A-C Polyethylene" forms stable, clear emulsions, and those containing as high as 30-40 per cent solids can be prepared.

Emulsions can be made with extremely small particle size, provided simple instructions are followed. Since a basic emulsion is used in many applications, the recommended procedure for preparing the basic, low viscosity emulsion should be described. As emulsifiable "A-C Polyethylene" has a higher melting point than most commonly used vegetable and mineral waxes, difficulties in emulsification may arise by using conventional techniques. In our research laboratory we have found that the wax-to-water method is to be preferred over the water - to - wax method

The wax-to-water method is familiar to most of you, and since such a wide variety of equipment is used in the trade, a basic laboratory procedure was developed as a guide in adapting the polymer to your particular process.

Wax-to-Water Procedure

Emulsion proportions:	
Emulsifiable A-C Polyethylene 629	30 parts
Oleic Acid	6
Morpholine	6
Water	138

Table II. Typical Properties

	A-C Polyethylene 629	Emulsifiable Petroleum Wax	Carnauba
Melting Point °F.	208-212	180-190	180-185
Penetration 100 gram/77°/5 sec.	2.5-3.5	4.7	less than 1
Acid Number	14-17	15-35	2-6
Saponification Number (Approx.)	14-17	45-85	70-85
Color—NPA	less than 1	3-6	No. 1-2 No. 3 N.C. Over 8
Impact Strength ft. lbs./in.	4.8*	0.6	0.3
Viscosity @ 140° C.	80†	12-20	13

* Izod Impact Tester, ASTM D-256-47T (Specimens un-notched).
† Saybolt Furol Sec. 60 cc. efflux.

Procedure:

1. Melt the "A-C Polyethylene" and add the oleic acid, avoiding overheating.
2. With the melt temperature at 120-130° C., add the morpholine. Care must be taken to prevent boiling out the morpholine. There is a sufficient excess to allow for minor evaporation. *Avoid open flames,* since morpholine has a *flash point of* 100° *F.*
3. While the polymer is being melted, heat the water. Bring to a boil and turn off heat just before using.
4. With rapid stirring (but below speed at which air is whipped in), slowly add the melt to the water (1-3 minutes). During the addition, the temperature of the melt should be 115-125° C. *and the water* 95-99° *C.* (not boiling). Add the melt at a steady rate to the top of the vortex formed by the stirring action. (The melt stream should not hit the beaker side or the stirrer shaft.) With proper addition the melt will spiral down the vortex and be emulsified en route. If stirring speed is too low or rate of addition too high the melt will accumulate in the vortex and impair the quality of the finished product.
5. Cover, and with moderate stirring allow to cool to 40-50° C. Make up to weight to replace loss of water due to evaporation.

Before modifications are attempted it is recommended that the above procedure be studied and practiced. Fine-particle, translucent emulsions should be obtained, which show little or no tendency to cream.

Many modifications of this basic formula and method are possible. For example, the soap content can be cut significantly. The optimum emulsifier quantity will vary with the requirements of specific applications. Other fatty acids and other amines may be used, as well as cationic and non-ionic emulsifiers.

A recommended procedure for the preparation of emulsions on a larger scale is as follows:

Melting Wax: (a) The polymer can be melted in a jacketed kettle without difficulty using 15 psig steam if a small amount is melted with the fatty acid first. The remainder is added with agitation at a rate which does not overload the mixer. (b) If lower-melting waxes are used in the formulations, melt them first and add the polymer to the melt as above in order to hasten the melting operation. (c) Do not overheat the blend, since it may darken when held at elevated temperatures for extended periods.

Amines: Particularly when morpholine is used as the amine in the emulsifier, the kettle should be covered and care should be taken to avoid losses of amine due to excessive temperatures. Local ventilation may be desirable.

Wax Addition: The addition of the hot wax to water is not a problem except when it is added so fast that it raises the emulsion

Table III. Oleic Acid and Various Amines with A-C Polyethylene 629

(Wax to Water Method)

A-C Polyethylene 629	40	40	40	40	40
Oleic acid	5	6	5	6	7
Morpholine	7	—	—	—	—
2-amino-2-methyl-1-propanol	—	3	—	—	—
Monoethanolamine	—	—	4	—	—
Diethanolamine	—	—	—	5	—
Triethanolamine	—	—	—	—	7
Water	To make up to desired concentration				

temperature enough to make it boil over.

Cooling: The cooling period may be shortened by using cold water in the kettle jacket, provided the agitation is continued.

Clear stable emulsions may be prepared over a wide range of concentrations using emulsifiable "A-C Polyethylene." As an example, Figure 1 shows the viscosity variation of a "basic emulsion" of "A-C Polyethylene 629" as a function of concentration.

A sharp increase in viscosity will be noted at between 20 and 30 per cent total solids, and in the neighborhood of 40 per cent total solids the emulsion changes from a viscous liquid to a non-flowing jelly.

In certain applications it may be advantageous to prepare high concentration stock emulsions that are subsequently extended to the concentration of the finished product. Emulsifiable "A-C Polyethylene" lends itself well to this technique. Emulsions extended at room temperature with low mineral content water retain their original quality. However, due consideration should be given to the viscosity of high concentration emulsions and the equipment necessary for handling them.

After the basic emulsion technique has been mastered, many variations using less soap are possible. A few examples of typical modifications are presented in the Tables III and IV:

Table IV. Miscellaneous Emulsifiers with A-C Polyethylene 629

(Wax to Water Method)

A-C Polyethylene 629	40	40	40	40
Stearic Acid	6	—	—	—
Neofat 42-12*	—	4	—	—
Morpholine	8	—	—	—
2-amino-2-methyl-1-propanol	—	4	—	—
Armac T*	—	—	12.8	—
Pluramine S-100†	—	—	—	6
Water	To make up to desired concentration			

* Armour Chemical Division, Armour & Co.
† Kearney Chem. Co.

Figure I. Viscosity variation of a "basic emulsion" of "A-C Polyethylene 629" as a function of concentration. Measurement was made on Model LVF Brookfield "Syncro-Lectric" viscosimeter.

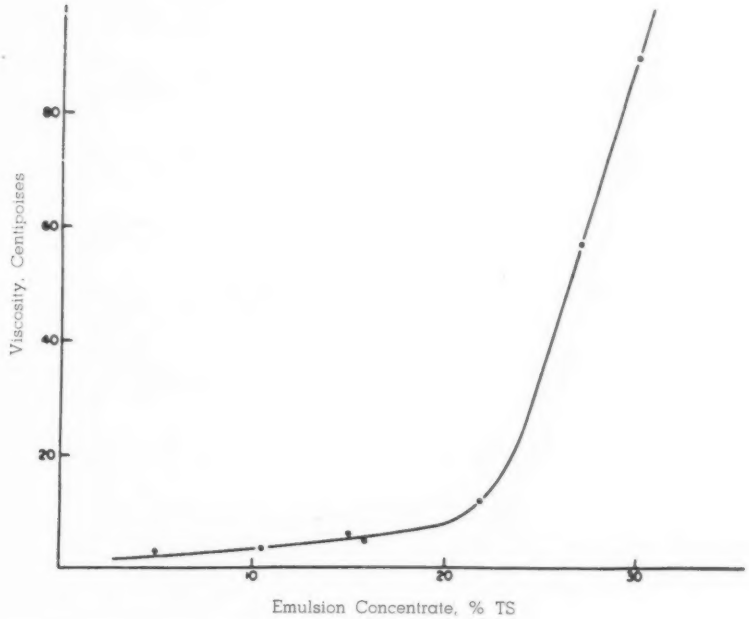


Table IV shows that anionic, non-ionic or cationic emulsifiers can be used. Emulsions of "A-C Polyethylene" can be prepared from pH of about 4 to a pH of 12 or 13.

Typical formulations are presented in Table V, shown to illustrate some of the ways the "A-C Polyethylenes" can be used. Variations of these formulations will be immediately apparent to experienced formulators. It is strongly recommended, again, that the basic laboratory emulsification procedure which we described in the preceding section should be tried before modifications are made.

"A-C Polyethylene 629," in combination with a resin and a leveling agent gives a water emulsion floor polish which has high gloss, water resistance, and exceptional durability. The formulations using Ubatol 2001* as the resin and Durez 15546† as the leveling agent are suggested as high quality industrial polishes.

The emulsions and solution are prepared separately to 15 per cent total solids and blended.

Emulsion is prepared following the basic laboratory procedure.

Table V. Heavy Duty Floor Polish

A-C Polyethylene 629 Emulsion	
A-C Polyethylene 629	40 parts
Oleic Acid	6
Morpholine	7
Water	254

Resin Emulsion	
Ubatol 2001 (36% total solids)	100 parts
Dibutyl phthalate	2.5
KP 140‡	2.0
Water	165.5

Mix together at room temperature the dibutyl phthalate, KP 140, and the Ubatol 2001. Stir the mixture moderately for one-half hour. Then add the water and stir a few minutes.

Leveling Agent Solution	
Durez 15546 Resin	30 parts
Ammonium Hydroxide (28%)	5
Water	165

* Union Bay State Chemical Co.
† Durez Plastics Div., Hooker Electrochemical Co.
‡ Ohio Apex Corp.

Table VI. High Shellac Floor Polish

I Borax Cut Shellac Solution	
Shellac, bleached dewaxed	108.75 lbs.
Borax, 5 mol	21.50
Water	709.75
	840.00 lbs. (100 gal.)

Heat water to 85° C. add one-half of the ammonium hydroxide, and with good agitation add the Durez 15546. Temperature should be maintained at 85-88° C. Add the remainder of the ammonium hydroxide and stir until solution of the Durez 15546 is obtained.

The formula shown in Table VI is representative of a good, high shellac type dry-bright polish containing A-C Polyethylene 629.

In a heated kettle, raise the temperature of the water to 160° F. and add the borax with stirring. Continue stirring and heating and add the shellac in granular form. Stir until solution takes place, cool the batch, and make up to weight for loss of water due to evaporation.

II A-C Polyethylene 629 Wax Emulsion	
A-C Polyethylene 629	90 lbs.
Durez 219 Resin*	30
Neofat 42-12†	12
2-amino-2-methyl-1-propanol	12
Water	706
	850 lbs. (100 gal.)

III Finished Product	
Part I Borax Cut Shellac	65 gallons
Part II Wax Emulsion	35
	100 gallons

* Durez Plastics Div., Hooker Electrochemical Co.
† Chemical Division, Armour and Co.

Preparation of a typical formulation containing 15 per cent total solids is shown in Table VII.

Table VII. Carnauba Base Floor Polish

Wax Emulsion	
Carnauba	30 parts
A-C Polyethylene 629	10
Oleic Acid	7
Morpholine	6
Water	260

Emulsion is prepared following the basic laboratory procedure (water to wax).

Leveling Agent Solution	
Shanco L-1001 *	52 parts
Borax, 5 mol	23
Water	425

Shanco Plastics & Chemicals, Inc.

Heat water to 90° C., add the borax with agitation until dissolved. Maintaining the temperature at 90° C., add the Shanco resin and stir until the solution is achieved.

The finished product is obtained by blending the desired amount of leveling solution with the wax emulsion. Recommended proportions are 25 or 30 parts of leveling solution to 75 or 70 parts of emulsion. For greater water resistance, ammonia-cut resins may be used. Best leveling and gloss are obtained with borax-cut resins, particularly Shanco L-1001.

Table VIII. Typical Emulsions of A-C Polyethylene 629 With Other Waxes and Resins

(Wax to Water Method)				
A-C Polyethylene 629	30	40-0*	40-20*	40-10*
Durez 219†	10	—	—	—
Carnauba, No. 1 Yellow	—	0-40	—	—
Crown 1035‡	—	—	0-20	—
Paraffin	—	—	—	0-30
Oleic Acid	—	5-8	5-7	5-7
Neofat 42-12¶	4	—	—	—
Morpholine	—	7-5	7	7
2-amino-2-methyl-1-propanol	4	—	—	—
Water	To make up to desired concentration			

* Total combined wax 40 parts. Water to wax method may be used if sufficient additive wax is present.
† Durez Plastics Div., Hooker Electrochemical Co.
‡ Petrolite Corporation.
¶ Armour Chemical Division, Armour and Co.

For those of you interested in paste polishes I would recommend the use of "A-C Polyethylene 6." As low as 10 per cent of this material will form a thixotropic gel in most solvents. To prepare such a gel, dissolve the "A-C Polyethylene" in solvent and cool. The firmness of the gel obtained will depend on the rate of cooling, firmer gels resulting from faster cooling methods.

The use of an "A-C Polyethylene" gel permits pouring polish at higher temperatures, and shortens the cooling cycle of individual units—a definite time saving in production. "A-C Polyethylene 6" imparts a smooth glossy surface to paste polishes.

Mrs. Louis Gillespie Dies

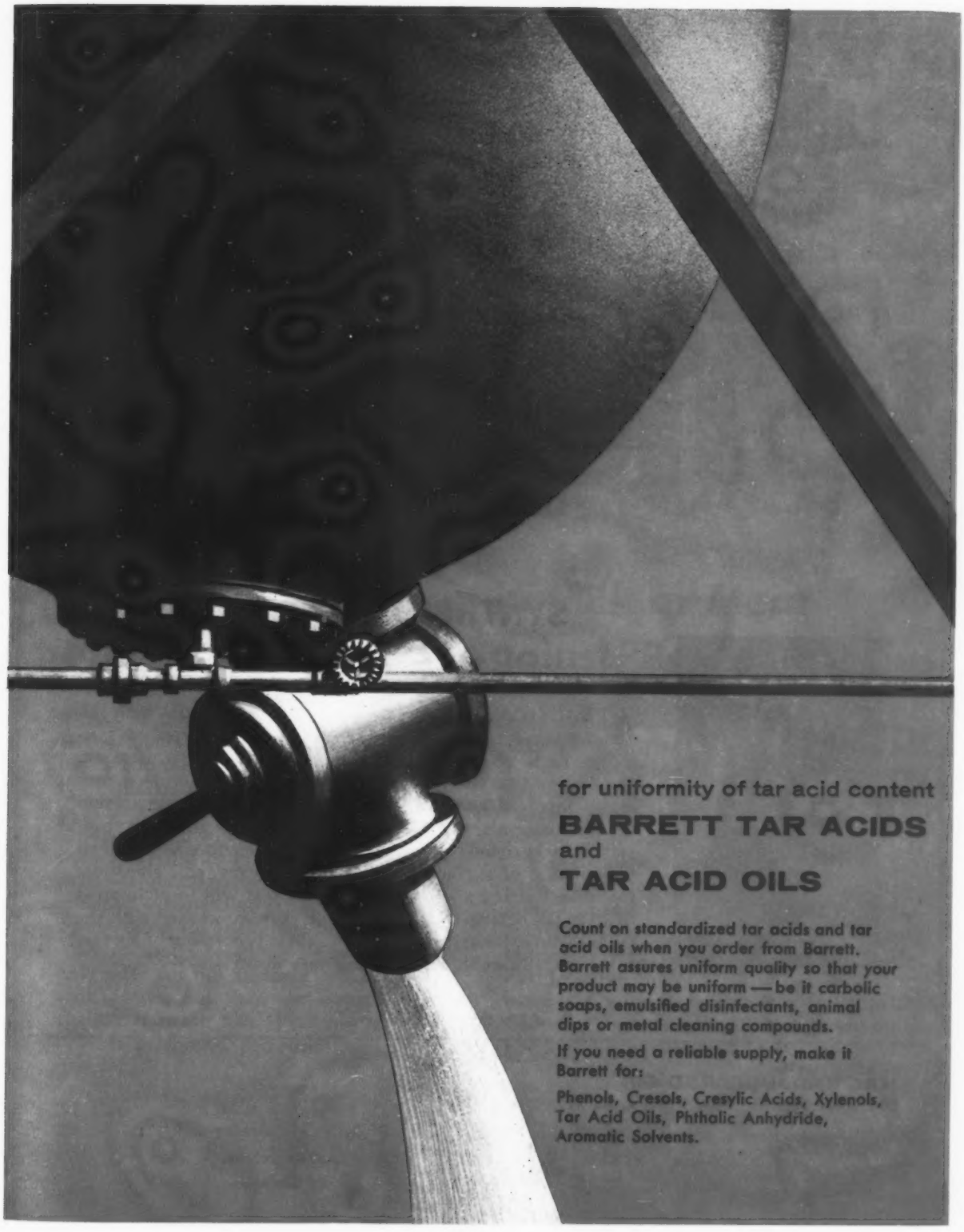
Elaine G. Gillespie, wife of Louis Gillespie, president of Gillespie-Rodgers-Pyatt Co., New York, died Aug. 10 at her home in Morristown, N. J.

★

Honor Tall Oil "Dean"

Charles M. Thorsen, sales consultant to the Union Bag-Camp Paper Corp., New York, was honored recently by members of tall oil division of the Pulp Chemicals Association, New York, at a meeting held at the Quaker Ridge Country Club, Scarsdale, N. Y. In recognition of his 22 years service to the tall oil industry. Mr. Thorsen received an inscribed, silver testimonial tray, which was presented by Albert Scharwachter, division chairman and president of the association. In making the presenation Mr. Scharwachter described Mr. Thorsen as "dean emeritus" of the tall oil industry and reviewed his early struggles to get tall oil recognized as a usable fatty acid. Among those in attendance were H. C. Zeni, Harry Fagan and G. H. Eick, Arizona Chemical Co., New York, E. M. Godat, Crossett Chemical Co., Crossett, Ark., R. J. Spitz, Newport Industries, Inc., New York, L. J. Doyle and A. B. Doran, Union Bag-Camp Paper Corp., A. T. Cirino and F. J. Eveline, West Virginia Pulp & Paper Co., New York, Dernell Every, T. K. Heston, Dr. Arthur Pollak and I. B. Oseas, tall oil division of Pulp Chemicals Association.

Charles M. Thorsen, (r.) sales consultant to Union Bag-Camp Paper Corp., New York, receives inscribed silver testimonial tray from Albert Scharwachter, Arizona Chemical Co., New York City, division chairman and president of the Tall Oil Division of the Pulp Chemical Association.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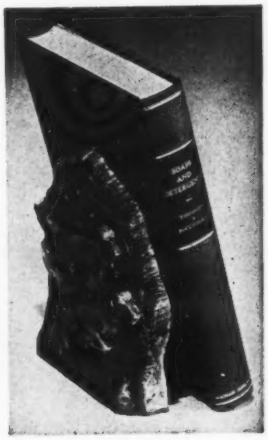

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Mandatory Labeling

Current situation regarding mandatory labeling requirements of insecticides and disinfectants

By John D. Conner*
Counsel, Chemical Specialties Manufacturers Assn.

IN DISCUSSING the requirements of mandatory labeling of insecticides and disinfectants, let me first bring the subject into its proper perspective and outline what I am not going to cover. This discussion will be limited to the mandatory labeling requirements, in other words, what must be stated on the label and labeling of insecticides and disinfectants. What claims of a permissive nature can be made for these products will not be considered for the following reasons: A.) There will probably be no room left on the label or labeling for permissive claims after the requirements of the mandatory claims have been made; B.) My experience over the past few years has indicated that the manufacturers of these products have developed considerably more expertise in formulating permissive claims than they have in drafting those of a mandatory nature.

With that definition of purposes, let us now plunge into a discussion of the mandatory labeling requirements of insecticides and disinfectants. It is only the tyro who need be reminded that the labeling pattern of insecticides and disinfectants is established by the Federal Insecticide, Fungicide and Rodenticide Act and the counterpart State Acts, the majority of which are patterned after the Federal and the Uniform State Act. Since most of the insecticides and disinfectants are shipped in interstate commerce, it is a basic requirement that they be labelled in accordance with the Federal Act. Whether or not they must be registered under and meet the requirements of the various State Acts may depend upon the method of sale and distribution, warehousing and other similar factors.

A DISCUSSION of the problems pertaining to the precautionary labeling of insecticides and disinfectants will appear next month as the second part of a review of this timely subject by A. Haldane Gee, Foster D. Snell, Inc., New York. Dr. Gee is also chairman of C.S.M.A.'s precautionary labeling committee.

For the purpose of this discussion, we will consider the requirements of the Federal and the Uniform State Act, but recognize at the same time that there may be deviations from this pattern by individual states.

There are six basic types of information which must appear on the label or the labeling of an insecticide or disinfectant. They may be summarized as follows:

(1) The name and address of the manufacturer or person for whom the product is manufactured.

(2) The name, brand or trademark under which the product is sold.

(3) The net contents.

(4) An ingredient statement.

(5) Directions for use.

(6) An appropriate warning or caution statement, when necessary to prevent injury to animals, vegetation and useful invertebrate animals.

I will summarize the information which is required under the first five categories.

(1) *The Name and Address of the Manufacturer, Registrant or Person for Whom the Product is Manufactured must be stated on the label.* (Sec. 3a (2) (a)).

The details of this requirement are spelled out in Regulation 162.6 (b). These regulations state three requirements:

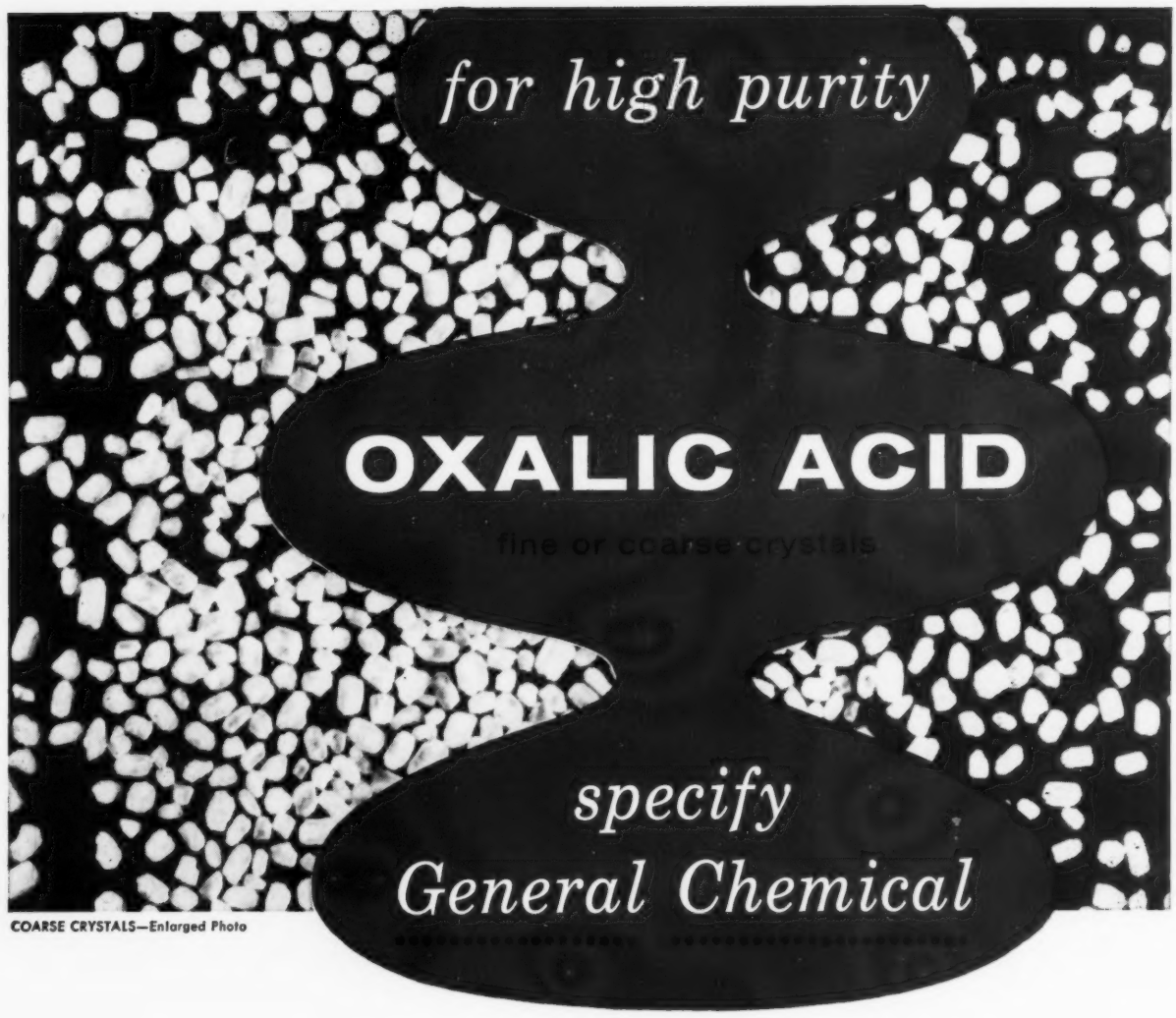
(1) The statement of the name without qualification is considered to be the name of the manufacturer.

(2) If the name on the label is not that of the manufacturer, it shall be qualified by appropriate words to show the function of the person whose name does appear on the label.

(3) No street address is necessary if the name appearing on the label is listed in a current city directory.

The most frequently recurring problem arising under this requirement is the use of an unqualified name by a distributor or other person who is not the manufacturer. Occasionally the problem arises as to whether the registrant qualifies as the manufacturer of the product. I believe the Department of Agriculture and most of the states have followed a common sense approach to this question and have normally held that where a

*Paper presented during a joint session of the Insecticide Division and the Disinfectant and Sanitizers Division at 42nd midyear meeting, Chemical Specialties Manufacturers Assn., Chicago, May 22, 1956.



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product is manufactured for a person on a contract basis and therefore under the control of that person, he will qualify as the manufacturer.

(2) *The Name, Brand or Trademark* under which the product is sold must be stated on the label. (Sec. 3a (2) (b)).

Interpretation No. 4 issued under the Federal Act describes the scope of permissible names and the conditions under which a name is considered to be false or misleading. Briefly stated, any name may be used which is not false or misleading. Names which give clear, accurate information as to the composition of the product may be used.

If the product contains two or more ingredients, it is permissible to use the name of only one ingredient if there is enough of that ingredient present to make the product effective for the purpose intended and if the name indicates the presence of other ingredients, or if it is present in sufficient quantity to be of value and its percentage is shown.

If the product consists of a single principal active ingredient, together with other active or inert ingredients, the name of the principal ingredient may be used followed by the word "dust", "spray", "insecticide", "disinfectant", etc., assuming the principal ingredient is present in sufficient amount to be effective for the purposes for which it is intended.

There are a number of circumstances under which a name may be misleading. It may be misleading because it gives the wrong impression of the composition of the product or because it implies an effectiveness which it does not possess.

A coined name may be misleading because it gives a false impression as to the composition of a product. The fact that a name may have been registered as a trade name does not have any bearing on the question of whether it will be considered to be misleading.

One of the most frequently recurring problems in connection with product names is the unwarranted use of such words as "concentrate", "super-strength", etc. The Department of Agriculture considers the use of the word "concentrate" to be misleading when it is used to describe any ready to use product. It may be used if the product is to be diluted before use.

Although the Department of Agriculture has not gone so far as to withhold registration, because of the use of such words as "concentrate", some of the individual states have withheld registration for this reason.

Regulation 162.6 (c) requires that the product shall be registered under the same name which appears on the label.

(3) *The Net Weight or Measure Must be Stated on the Label.* (Sec. 3a (2) (c)).

Regulation 162.6 (d) relates to the manner in which the weight or measure of content is to be stated. The weight shall be deemed to be a statement of the average content unless it is specifically stated to be a minimum weight.

The weight must be stated in terms of weight or measure in general use, if there is such general use. If not, it shall be stated in terms of liquid measure if the product is a liquid, and in terms of solid measure if the product is solid, semi-solid, viscous, or a mixture of liquid and solid.

If the weight is stated as a minimum, there can be no variation below that minimum. If the weight is not stated as minimum, variation will be permitted only to the extent which represents deviations unavoidable in good packing practice and the average shall not be less than the stated weight.

In practice I do not believe that the weight or content statement requirement presents any serious problem.

(4) *The Label Must Contain an Ingredient Statement.* (Sec. 2u (2) (e)).

The ingredient statement presents two primary questions. First, where must it appear and, second, what must it contain?

Regulation 162.7 (a) specifies that the ingredient statement must appear on that part of the label displayed under customary conditions of purchase except in cases where the Director determines that, due to the size or form of the container, a statement on that portion of the label is impractical and permits the statement to appear on another side or panel of the label.

Paragraph (e) of Interpretation No. 5 specifies that if the package contains not more than one pound of a solid or one pint of a liquid, the ingredient statement may appear on the side or back panel of the label. In addition, in case the ingredient statement is unusually long, permission may be granted to place it on a side or back panel of the packages not more than 2½ pounds of a solid or three pints of a liquid.

I am sure that all of you are familiar with the basic requirements of the form and content of the ingredient statement. Accordingly, I will not review the details of these requirements other than to refresh your memory of the fact that under the Federal Act and that of the majority of the states, the two optional forms of ingredient statements are permitted in the case of insecticides and disinfectants.

Under the first option the ingredient statement takes the form of the name and percentage of each active ingredient, together with the total percentage of the inert ingredients.

Under the provisions of Regulation No. 162.7 (b), the well known common name of the ingredient must be given or if the ingredient has no common name, the correct chemical name. If there is no common name and the chemical composition is unknown or complex, the Director may permit the use of a new or coined name.

A trademark or trade name may not be used as the name of an ingredient except when it has been accepted as a common name. I understand that the Department of

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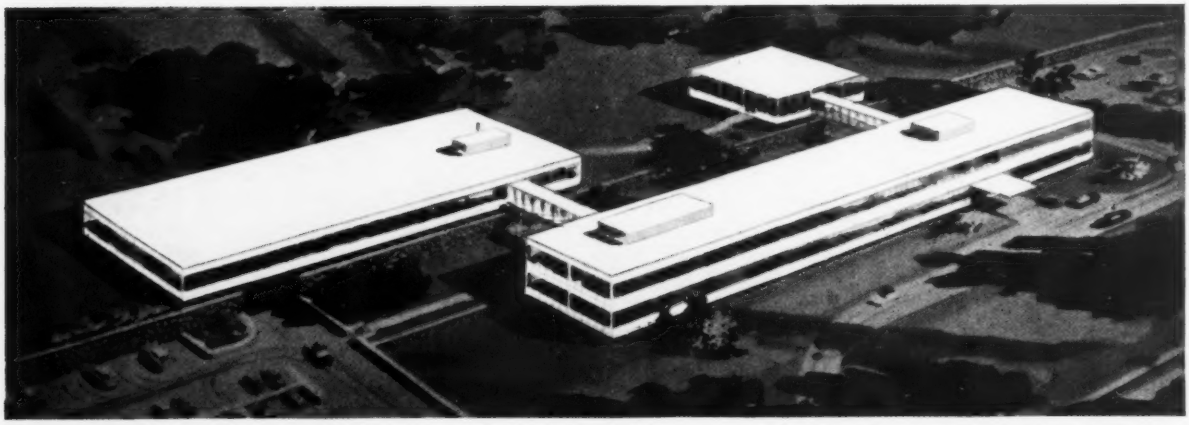

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Agriculture frequently has to ask that the labels submitted for registration be revised because of the use of trade names in the ingredient statement, in violation of this regulation. This sometimes occurs where the formulator wants to use the trade name of his supplier in the ingredient statement.

The Secretary is authorized to require the submission of the complete formula if he finds that such information is necessary to enable him to evaluate the product properly. The registrant may request that this information be kept confidential. If the product submitted for registration is complex, is new or novel, the registrant may save time by submitting the complete formula at the time the product is submitted for registration.

(5) *The Labeling Must Contain Directions for Use Which are Necessary and if Complied With, Adequate for the Protection of the Public.* (Sec. 2u (2) (c)).

The "directions for use" are the only one of the six mandatory labeling requirements which can be placed on the labeling. The information required under all other five categories must appear on the label. The term "labeling" includes not only the actual label on the retail package but also all circulars or leaflets accompanying the retail package. If the directions for use are printed on a circular or leaflet, the circular or leaflet must accompany each retail package so that each purchaser will receive a copy of it. Other details relating to the placing of instructions for use will be found in Paragraph (c) of Interpretation No. 7.

Directions for use are not required in the case of every product. They are required where they are necessary for the protection of the public. This includes not only the users of economic poisons but also those who handle them or may be affected by their use, handling or storage.

Interpretation No. 7, Paragraph (b), states that directions for use are considered necessary in the case of most small retail containers which go into the hands of users and in the case of large containers, with the following exceptions:

(1) Directions may be omitted under certain circumstances in the case of economic poisons packed in containers of 50 pounds or more of a solid or 20 gallons or more of a liquid.

(2) Directions for use may be omitted under certain circumstances if the economic poison is to be used by manufacturers of products other than economic poisons in their regular manufacturing processes.

(3) Directions may be omitted if the economic poison is sold only to physicians or veterinarians if the ingredient statement complies with option No. 1.

(4) Directions may be omitted under certain circumstances if the economic poison will be dispensed only on prescription of a physician or veterinarian.

(5) Directions may be omitted under certain circumstances if the economic poison is sold to distributors for dilution or mixing with carriers to prepare economic poisons for sale to the public.

The directions for use must be sufficient to enable the purchaser if he follows them to obtain the results promised him in the labeling or which he may probably expect to obtain by use of the product without injury to person or property. Discussions with officials of the Department of Agriculture indicate that the types of deficiency most frequently encountered in labeling submitted for registration revolve around the failure to give proper dosages, timing and frequency of application.

The requirements of the Miller Pesticide Residue Amendment to the Federal Food, Drug and Cosmetic Act, make it particularly important that the directions for use for products to be used in the growing or storage of agricultural commodities give adequate directions on dosages, timing and frequency of application in order to assure against excessive residues.

One of the problems with which a number of you are undoubtedly faced at the present is the necessity of revising the directions for use and other label claims of quaternary ammonium compounds in order to tie in these products with the recent revision of Appendix F of the "Milk, Ordinance and Code – 1953 – Recommendations of the U. S. Public Health Service." This revision will enable the manufacturers and distributors of these products who desire to sell in those areas which have adopted the U. S. Public Health Service recommendations, to tie in their products by adding specific information under the directions for use relating to the effects of hard water on the efficiency of the germicide.

The details relative to the registrative requirements for label amendments along this line have not yet been released by the Department of Agriculture but we understand that they have made definite progress in developing these requirements.

(6) *The Label Must Contain a Warning or Caution Statement which May be Necessary and If Complied With is Adequate to Prevent Injury to Living Men and Other Vertebrate Animals, Vegetation and Useful Invertebrate Animals.* (Sec. 2u (2) (d).

The requirements of the warning and caution statement will be discussed next month. I do not intend to discuss this except to invite your attention to one part of the requirement which I do not believe will be covered, namely it may be necessary that the label contain a warning and caution statement to prevent injury to vegetation. There are, of course, numerous products, the use of which may result in foliage injury unless certain precautions are taken. The warning and caution statement requirement frequently present the question of whether these precautions should

(*Turn to Page* 177)

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Evaluation of

Iodine Sanitizing Solutions

By Bernard Witlin and Louis Gershenfeld*

Philadelphia College of Pharmacy and Science

MANY presentations have extolled the microbiocidal virtues of iodine: its properties as a bactericide, spirocheticide, virucide, fungicide, protozoacide and matezoacide. The use of iodine as a sanitizing agent in environmental health procedures has been reported recently with frequency. These reports were published by us (1-6) and others (7-10), and numerous references will be found in these presentations. Because of such effective microbiocidal efficiency, solutions of free iodine and iodine-liberating preparations have gained commercial popularity and wide usefulness as sanitizing agents.

Extensive research has shown the efficiency of free iodine in concentrations as low as 0.1 p.p.m. and up to 25 p.p.m. depending upon the technique employed. The variations in the previous studies (1) (6) (11) have indicated the influences of factors such as concentration, time, temperature, volume, test organism, protein, pH, surface tension, solubilizing agents, detergency, wetting properties, ionic equilibrium, vapor pressure, stability and other characteristics.

This study concerns itself with a comparison of the findings obtained with various preparations containing free iodine employing the many different techniques now used for the evaluation of the efficiency of sanitizing agents.

Experimental

Test Bacteria: *Mirococcus pyogenes* var. *aureus* F.D.A. 209 A.T.C.C. No. 6538 and Hopkins strain 26 of *Salmonella typhosa* (Zoph) Weldin, F.D.A., A.T.C.C. No. 6539, both displaying a resistance to phenol as recommended by the "Association of Official Agricultural Chemists Phenol Coefficient Method – Official" were used (12). *Escherichia Coli* A.T.C.C. No. 11229 transferred daily on nutrient agar slants (13) was also employed.

Temperature: The tests were conducted at 5°C., 20°C. and at 37°C.

Samples Tested: Iodine Tincture (U.S.P. XV) and Iodine Solution (N.F. X), both containing 2 percent free iodine were employed. Available marketed iodophor preparations were tested. The two showing the greatest bactericidal activity were employed throughout all these experiments. Twelve acid buffered iodide-iodine preparations were formulated and prepared at Battelle Memorial Institute. Two of those screened, which revealed maximum sanitizing activity, were employed throughout the experiments. Sodium hypochlorite solution was employed as the source of available chlorine. All of the samples which were tested were assayed for free iodine and for available chlorine. The concentrations used throughout the tests contained identical quantities of free halogen.

The designations shown below refer to the samples tested:

A – Iodine Tincture U.S.P. (2 percent free iodine)

B – Iodine Solution N.F. (2 percent free iodine)

C – Iodophor (1.75 percent free iodine and phosphoric acid)

D – Iodophor (1.25 percent free iodine and phosphoric acid)

E – Battle Sanitizing Solution (phosphoric acid buffered iodine-iodide solution, 1.94 percent free iodine)

F – Battelle Sanitizing Solution (phosphoric acid buffered iodine-iodide solution, 1.64 percent free iodine)

G – Sodium Hypochlorite Solution (5.76 percent available chlorine) diluted with distilled water

Cultured Media: Formulas as given in "The Association of Official Agricultural Chemists Phenol Coefficient Method – Official" (12) and by Weber and Black (13).

Techniques: 1) A capacity test (6) for germicidal action utilized to determine the "maximum number of incrementally added microorganisms plus rigidly defined extraneous matter in solution or suspension, sterilizable by a given quantity of germicide" (14). In this test, varied volumes of the test bacteria were added to 5 ml. of a dilution of the sanitizing solution to be tested. One minute later, a 4 mm. standard (12) loopful of the bacteria-germicide mixture was transplanted to a sterile tube containing 10 ml. broth. Thirty seconds later, another increment of the culture of test bacteria was added and a minute later another 4 mm. loopful of the bacteria-germicide mix-

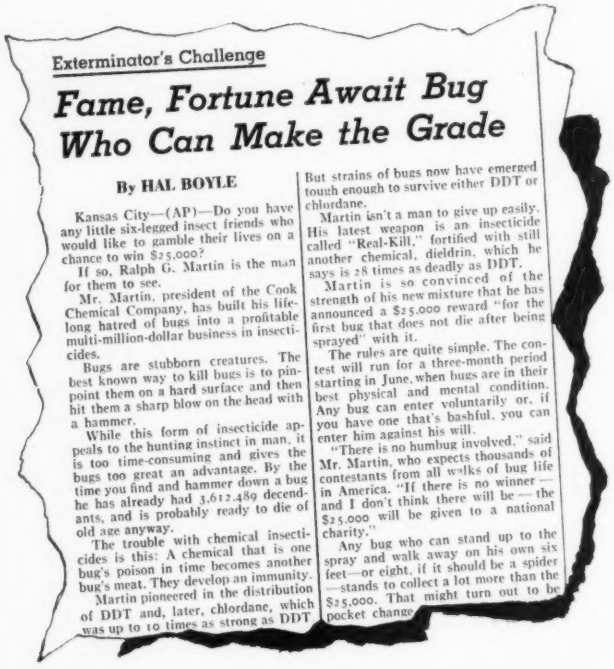
*Presented at the 56th General Meeting, Society American Bacteriologists, May 2, 1956, Houston, Texas.

$25,000

backs the switch to

SULFOXIDE

BR-135 and Dieldrin in new improved insecticide formula!



Exterminator's Challenge

Fame, Fortune Await Bug Who Can Make the Grade

By HAL BOYLE

Kansas City—(AP)—Do you have any little six-legged insect friends who would like to gamble their lives on a chance to win $25,000?

If so, Ralph G. Martin is the man for them to see.

Mr. Martin, president of the Cook Chemical Company, has built his lifelong hatred of bugs into a profitable multi-million-dollar business in insecticides.

Bugs are stubborn creatures. The best known way to kill bugs is to pinpoint them on a hard surface and then hit them a sharp blow on the head with a hammer.

While this form of insecticide appeals to the hunting instinct in man, it is too time-consuming and gives the bugs too great an advantage. By the time you find and hammer down a bug he has already had 3,612,489 decendants, and is probably ready to die of old age anyway.

The trouble with chemical insecticides is this: A chemical that is one bug's poison in time becomes another bug's meat. They develop an immunity.

Martin pioneered in the distribution of DDT and, later, chlordane, which was up to 10 times as strong as DDT. But strains of bugs now have emerged tough enough to survive either DDT or chlordane.

Martin isn't a man to give up easily. His latest weapon is an insecticide called "Real-Kill," fortified with still another chemical, dieldrin, which he says is 28 times as deadly as DDT.

Martin is so convinced of the strength of his new mixture that he has announced a $25,000 reward "for the first bug that does not die after being sprayed" with it.

The rules are quite simple. The contest will run for a three-month period starting in June, when bugs are in their best physical and mental condition. Any bug can enter voluntarily or, if you have one that's bashful, you can enter him against his will.

"There is no humbug involved," said Mr. Martin, who expects thousands of contestants from all walks of bug life in America. "If there is no winner — and I don't think there will be — the $25,000 will be given to a national charity."

Any bug who can stand up to the spray and walk away on his own six feet—or eight, if it should be a spider —stands to collect a lot more than the $25,000. That might turn out to be pocket change.

This news story dramatically emphasizes the faith of Cook Chemical Company in its new formulation of "Real Kill"—containing Sulfoxide.

Sulfoxide — product of S. B. Penick and Company — is an outstanding effective synergist . . . safe . . . non-irritating . . . with a mild, pleasant odor.

For technical information and suggested starting formulas for popular insecticidal sprays, send for your copy of our 12-page bulletin, SULFOXIDE.

PENICK

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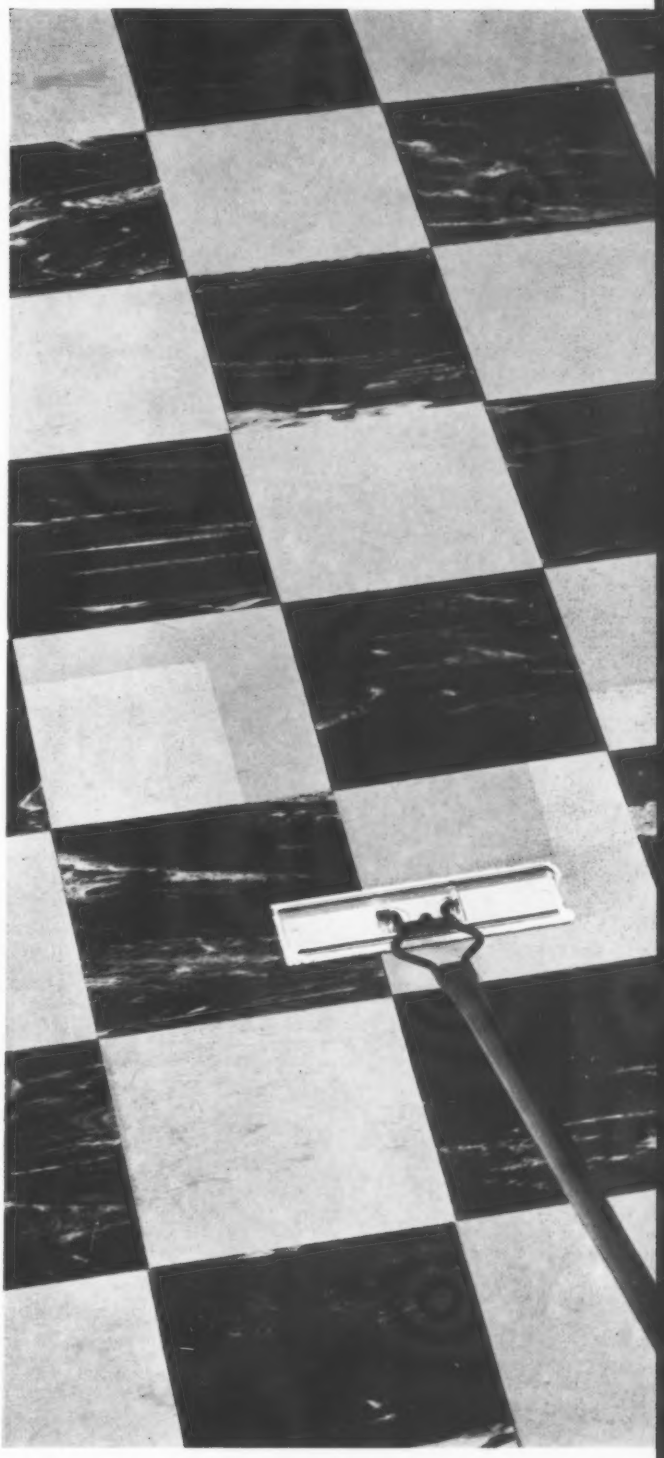
MICROCRYSTALLINE WAXES*

***Regular, oxidized and wax-resin blends.**

Bareco waxes have been used by leading polish manufacturers for many years. This wide acceptance has enabled Bareco to specialize in the refining of microcrystalline waxes with the polish-makers' needs as a definite objective. Because of this specialization, the use of Bareco wax products not only assures better polish characteristics; it provides them economically.



Here is a partial listing of Bareco polish waxes and their specifications:

BARECO WAX	MELTING POINT °F.	PENE-TRATION	COLOR N.P.A.	ACID NUMBER	SAPON. NUMBER
Petrolite C-700	190 Min.	4 Max.	1½ Max.	Nil	Nil
B-Square 190 A	190/195	2-7	1½ Max.	Nil	Nil
Petrolite C-1035	195 Min.	2 Max.	1½ Max.	Nil	Nil
Petronauba D	185 Min.	5 Max.	6 Max.	20-28	50-60
Petrolite C-15	180 Min.	4-6	4-5	15-17	45-55
Petrolite C-23	180 Min.	4-6	4-5	20-25	55-65
Petrolite C-36	180 Min.	5-7	4-6	30-35	75-85
Petrolite PE 100	195-200	2-3	4-6	15-20	45-55
Petrolite R 50*	190-200	2 Max.	4½ Max.	40-50	65-80
Petrolite P 20	210-220	2 Max.	3 Max.	Nil	Nil

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B 561

ture was transplanted. This was repeated until ten increments had been added and ten loopfuls of the mixture transplanted. The transplants were then incubated at 37°C. for 48 hours and the absence or presence of growth was noted macroscopically.

In our evaluation of suitable sanitizers to be used especially for hard surfaces after first cleaning the latter, we employed modifications as to the volume of inoculum and sanitizer. We also have included the various modifications introduced by workers of the U.S. Department of Agriculture, Bacteriological Unit, Pesticide Regulation Section. These include the use of 0.2 ml. quantities of bacterial culture to either 5 ml. or 10 ml. (6) amounts of germicide dilution. A phosphate buffer (pH 8.0) for chlorine dilutions instead of distilled water which was originally employed is used by them. The most recently introduced modification by the latter group appears in "The Manual of Methods of the A.O.A.C."—1955, 8th ed. (14) as "Available Chlorine Germicidal Equivalent Concentration (—)—First Action." In this latest modification, the procedure varies only in the fact that 0.05 ml. of the test bacterial culture is added to 10 ml. of the respective dilutions of the germicide or sanitizer.

2) The procedure of Black and Weber (13) for evaluating the germicidal efficiency of sanitizing solutions was employed, omitting the swab and medication tube counts. In this test, 5 ml. of an inoculum of known population was mixed with an equal volume of a sanitizing solution (known concentration). At intervals of 15, 30, 60, 120 and 300 seconds aliquots of the mixture were transferred to dilution blanks containing 0.4 percent sodium thiosulfate as an inhibitor. Plate counts were promptly made from aliquots of these dilutions to determine the number of surviving organisms in the test bacteria-sanitizing solution mixture at the corresponding time interval. Bacteriostatic control counts were performed by planting a double aliquot of the dilution made at the last time interval to which was added one ml. of a 10-6 dilution of the inoculum.

We have likewise employed the U.S.P.H.S., Robert A. Taft Sanitary Engineering Center modification (17) of the Black-Weber (13) method for evaluating the efficiency of sanitizing agents.

All testing methods were conducted at three different temperatures. Not only was the commonly employed room temperature (20°C.) used, but tests were performed at refrigerator temperature (5°C.) and at body temperature (37°C.).

Experiments

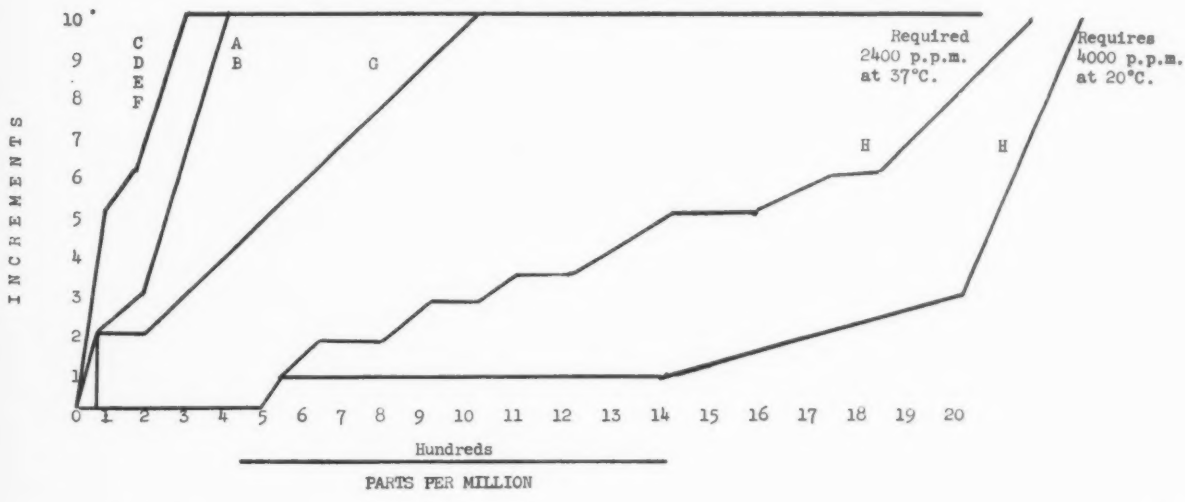
1. Capacity Tests: A) Five ml. portions of the various concentrations of the sanitizing solutions were employed. Two-tenth ml. volumes of the cultures of the test bacteria were added (a 1:25 ratio of test bacteria to sanitizing solution).

Concentrations of the sanitizing solutions were varied until sufficient concentration of free iodine was available to kill the test organism in all ten increments.

Chlorine controls prepared with sodium hypochlorite diluted with M/15 phosphate buffer solution (pH 8.0) and also diluted with distilled water were run in an identical manner. As we previously indicated (6), the original Cantor-Shelanski Capacity Test (15) did not employ a phosphate buffer as the diluent for the chlorine. This was introduced for "The purpose of employing a buffered chlorine control solution is to provide as a standard of reference a constant available chlorine minimum standard" (16). Nevertheless, it should be noted that in practice, chlorine dilutions are prepared with water as the diluent. The results obtained with 5 ml. of the concentrations of free iodine and available chlorine and 0.2 ml. test organisms (a 1:25 ratio) are recorded in Figure I.

It was noted that the iodine-

Figure I. Bactericidal Efficiency of Iodine Sanitizing Solutions—Capacity Testing Method
5 ml. Sanitizing Solution + 0.2 ml. Micrococcus pyogenes var. aureus.



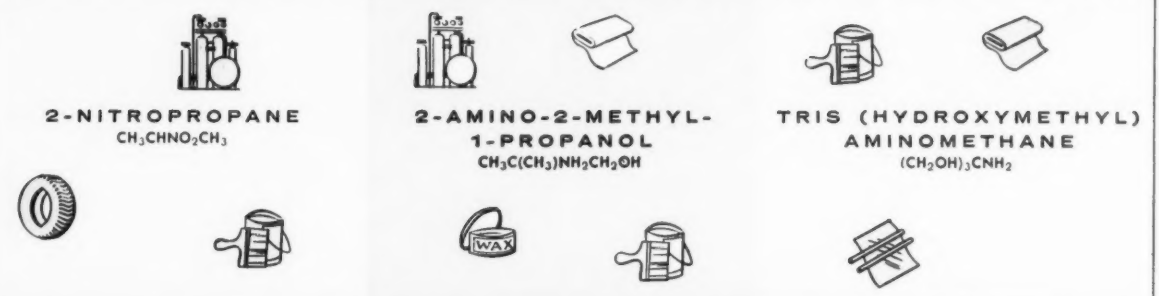
CSC NITROPARAFFINS

NITROMETHANE
CH_3NO_2

NITROETHANE
$CH_3CH_2NO_2$

1-NITROPROPANE
$CH_3CH_2CH_2NO_2$

IMPROVING PROCESSES AND PRODUCTS

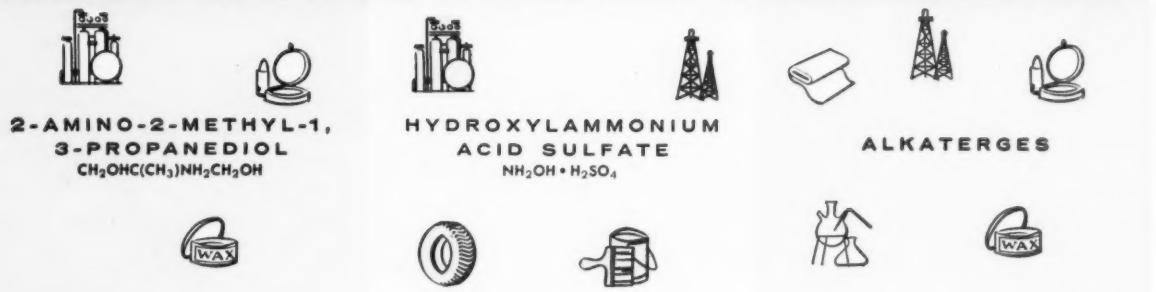


2-NITROPROPANE
$CH_3CHNO_2CH_3$

2-AMINO-2-METHYL-1-PROPANOL
$CH_3C(CH_3)NH_2CH_2OH$

TRIS (HYDROXYMETHYL) AMINOMETHANE
$(CH_2OH)_3CNH_2$

FOR AMERICA'S MAJOR INDUSTRIES



2-AMINO-2-METHYL-1, 3-PROPANEDIOL
$CH_2OHC(CH_3)NH_2CH_2OH$

HYDROXYLAMMONIUM ACID SULFATE
$NH_2OH \cdot H_2SO_4$

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Table I. Capacity Test

2 ml. Germicide + 0.2 ml. Inoculum

Bacteria	Temp. C°	p.p.m.	A	B	C	D	E	F	G	H
S. typhosa	20°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
		10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	2	5	3	4	5	2	0
		200	3	3	6	4	5	6	3	0
	37°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
		10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	2	0
		100	2	2	5	5	5	5	3	0
		200	4	4	6	6	6	6	6	0
	5°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
		10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	2	3	3	3	3	2	0
		200	3	3	4	4	4	4	3	0

5 ml. Germicide + 0.2 ml. Inoculum

Bacteria	Temp. C°	p.p.m.	A	B	C	D	E	F	G	H
M. pyogenes var. aureus	20°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	0	1	1	1	0	0
		8	0	0	0	1	1	1	0	0
		10	0	0	0	1	1	1	0	0
		20	0	0	0	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	2	5	3	3	5	1	0
		200	3	3	6	4	4	6	2	0
	37°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
		10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	1	4	4	4	4	2	0
		200	3	3	6	6	6	6	2	0
	5°	2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	0	0	0	0	0	0
		8	0	0	0	0	0	0	0	0
		10	0	0	0	0	0	0	0	0
		20	0	0	0	0	0	0	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	2	3	3	3	3	1	0
		200	3	3	4	4	4	4	2	0

phosphoric acid containing preparations exhibited better efficiency than did those iodine preparations not containing phosphoric acid in their formulas. Iodine in the procedures used was much more efficient in all instances than was chlorine. The results are recorded in Table I, Figures I and II. In Figure I, the findings appear to be in a straight line, because of the distance between dilution points (100 p.p.m.) plotted. However, on repeating the experiment with the dilutions spaced closer (10 p.p.m.) a step-like curve is observed (See Figure II).

B) The above procedure (A) was repeated using 10 ml. volumes of the various concentrations of the sanitizing solutions; two tenth ml. volumes of the cultures of the test bacteria were added (a 1:50 ratio of test bacteria to sanitizing solution).

The results obtained are recorded in Table II and Figure III.

It was observed that the iodine-phosphoric acid-containing preparations exhibited better efficiency than did those iodine preparations without phosphoric acid in their formulas. Also, that iodine in all instances was much more efficient than chlorine.

In comparison with procedure (A) (Figure I), this technic (B) (Figure III) reveals that weaker concentrations of the sanitizing solutions under test display marked antibacterial efficiencies.

C) The above procedure (B) was repeated with the exception that five-hundreth ml. volumes of the cultures of the test bacteria were used (a 1:200 ratio of test bacteria to sanitizing solutions under test). The findings are recorded in Table III and Figure IV.

D) Capacity tests were performed employing sterile distilled water containing one percent whole milk as the diluent for the sanitizing solutions. Five-hundreth ml. volumes of the cultures of the test bacteria were added (a 1:200 ratio of test bacteria to sanitizing solution).

The results are recorded in Figure V. It was observed that one percent whole milk did not materially effect the efficiencies of iodine sanitizing solutions, but did reduce the efficiencies of the chlorine in M/15 phosphate buffer and in distilled water.

II. pH Studies

A) To determine why solutions containing identical amounts of free iodine displayed variable degrees of bactericidal activity in experiments I-A, I-B, and I-C, pH determinations were conducted. These were made on each solution, on each test culture, and on each increment and mixture thereof, as

Flies can't read...

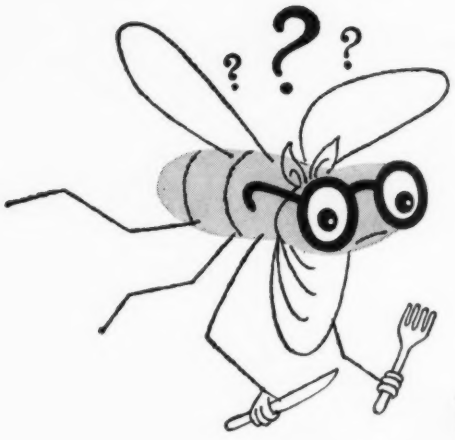

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Figure II. Bactericidal efficiency of iodine sanitizing solutions — capacity testing method.

5 ml. sanitizing solution + 0.2 ml. micrococcus pyogenes var. aureus.

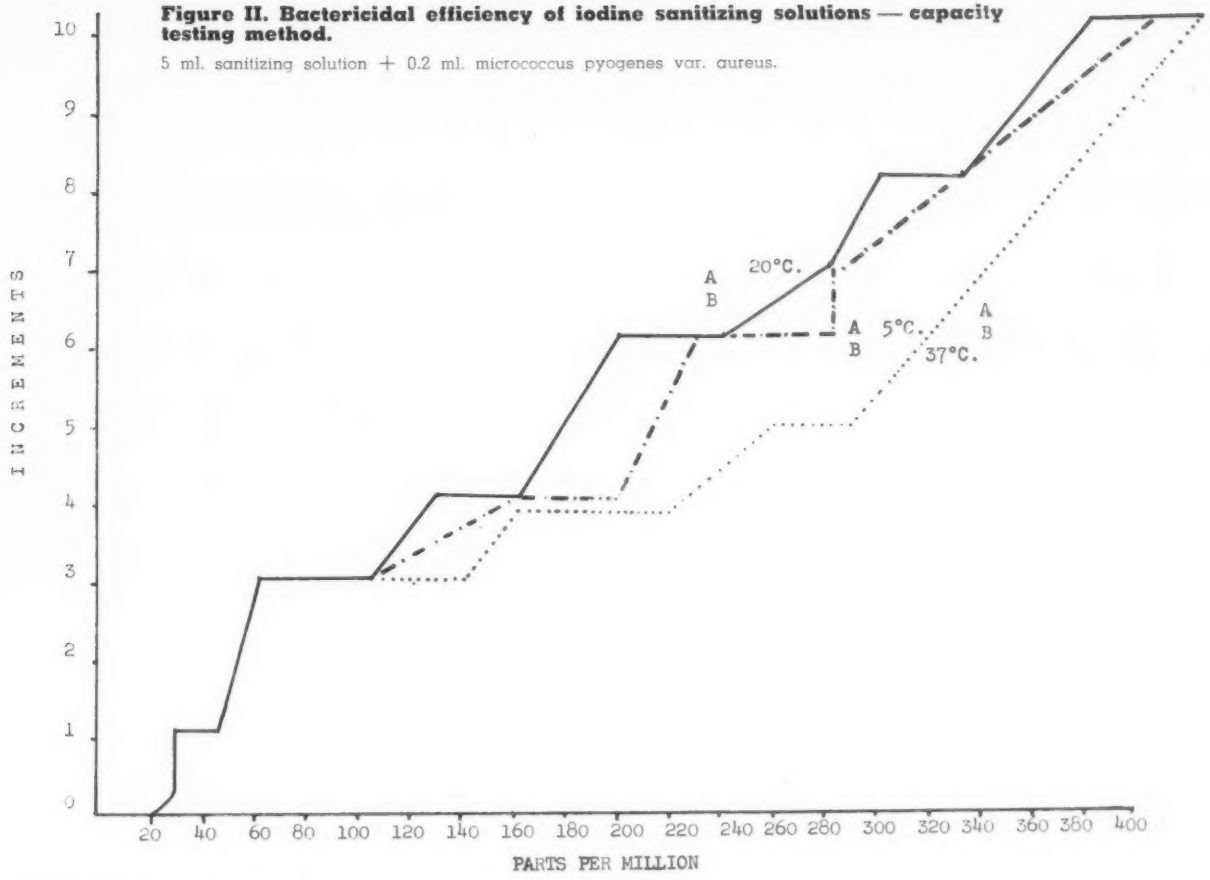
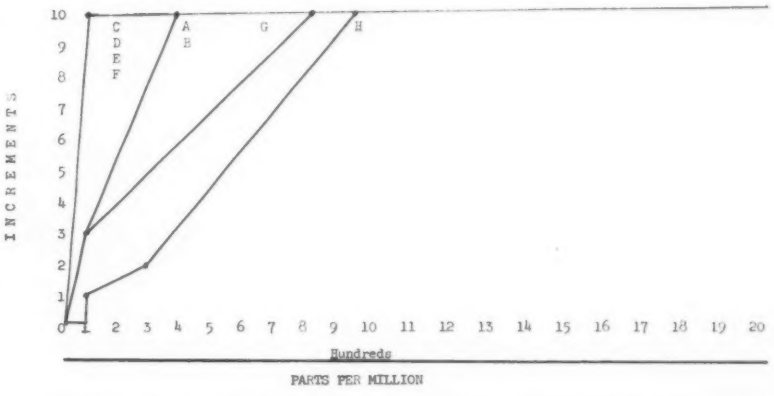


Figure III. Bactericidal efficiency of iodine sanitizing solutions — capacity testing method.

10 ml. sanitizing solution + 0.2 ml. micrococcus pyogenes var. aureus.



in the above capacity tests for germicidal action. Inasmuch as sanitizing solutions C, D, E, and F contained phosphoric acid, a solution of 0.5 percent phosphoric acid was prepared in distilled water and as a control was tested by the above capacity techniques.

It also appeared of interest to note whether the pH buffering was due to a phosphoric acid-protein system (phosphorylation) or whether other acids would or would not be just as effective. Accordingly one-half percent solutions each of hydrochloric acid and

(*Turn to Page* 193)

Figure IV. Bactericidal efficiency of iodine sanitizing solutions — capacity testing method.

10 ml. sanitizing solution + 0.05 ml. micrococcus pyogenes var. aureus.

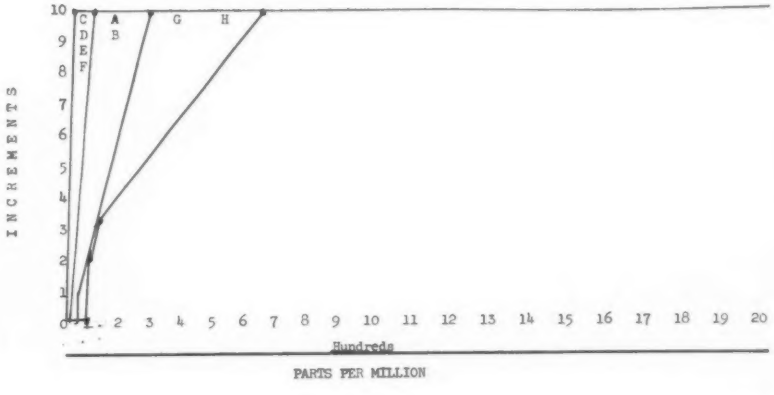


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Table 2. Influence of Components of Solution on Amount And Condition of Collapsible Foam Produced

Components, parts by volume						Liquid in Generator ml	Foam Produced ml	Remarks
Foamer	Water	Isopropanol	Cellosolve	Carbitol	Foamer Solution (a)			
—	90	10	—	—	—	100	1,100	Collapses rapidly
A	95	—	—	—	5	100	200	Very watery
A	93	—	1	1	5	100	650	Thin watery
A	85	10	—	—	5	100	2,000	Good body
A	80	10	5	—	5	200	3,500	Good body
A	75	10	10	—	5	200	3,500	Good body
A	74	10	1	1	5	200	3,800	Good body
A	74	20	1	—	5	200	3,500	Good body
A	70	20	5	—	5	200	3,450	Good body
F	83	10	1	1	5	200	2,750	Good body
F	80	10	5	—	5	200	2,650	Good body
F	75	10	10	—	5	200	1,650	Somewhat thicker
F	74	20	1	—	5	200	700	Thin watery
F	70	20	5	—	5	200	600	Thin watery

(a) Foamer solution contains 1 per cent by weight foaming agent and 0.2 per cent by weight dispersant.

Plant Maintenance Show

After a four-year interval, the eighth annual plant maintenance & engineering show will return to Cleveland, Jan. 28 to 31, at the Public Auditorium, it was announced recently by Clapp & Poliak, Inc., 341 Madison Ave., New York 17, N. Y. Approximately 400 exhibitors will occupy more than 100,000 square feet of the auditorium to display their wares. More than ninety-five percent of the exhibit space is already assigned. Further information can be obtained from Clapp & Poliak.

★

Mich. Chem. Sales Up

Michigan Chemical Corp., St. Louis, Mich., last month reported an increase in sales and earnings for the first six months of 1956. Sales totaled $3,588,997 in the period, as compared with $3,311,911 in 1955. Earnings increased to $244,923 from $141,238 a year earlier. Because of depletion allowances no taxes were required in either year. Common stock showed a net income of $0.45 per share as compared with $0.26 per share in '55, an increase of 73 percent.

The second quarter of 1956 showed an improvement in total sales to $2,099,715, against $1,723,282 for a similar period in '55. Net earnings also increased in that period to $192,560, equal to $0.36 per common stock share, compared with $111,388, equal to $0.20 per share in the previous year. There was also a $188,043 allowance for depreciation and amortization of property, plant, and equipment for the six month period, compared with $183,444 in '55. $406,000 was spent on capital investment.

Novelty Soaps

(*From Page 37*)

mostly cooperative. Mem stresses window displays, usually has 30 or 40 in New York City alone. When a new representative is appointed one of the company executives works with him. Mem's sales volume is in the vicinity of $1,000,000 a year.

Mem exports to various South American countries and has licensing agreements with firms in Chile, Colombia, as well as Italy. The Viennese firm, largest producer of soap in Austria, exports to nearly 30 countries, with the United States ranking first, Canada second, and Australia third.

Collapsible Foams

(*From Page 39*)

the rate of collapse of the foam from A. The foam from D was not affected noticeably, but this may have been because this foam normally collapsed more slowly than that from A.

It is concluded that the response of foamer performance to changes in the concentrations of the organic solvents and to the presence of a foam stabilizer is probably peculiar to the individual foamer.

Reference

1. Kurz, P. F., *Soap and Chemical Specialties, 31* 77 (1955).

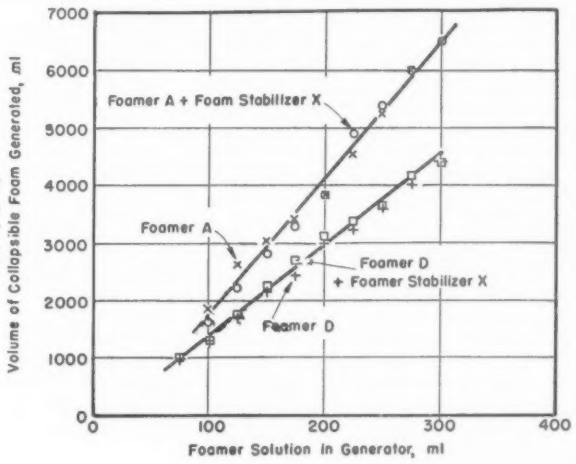
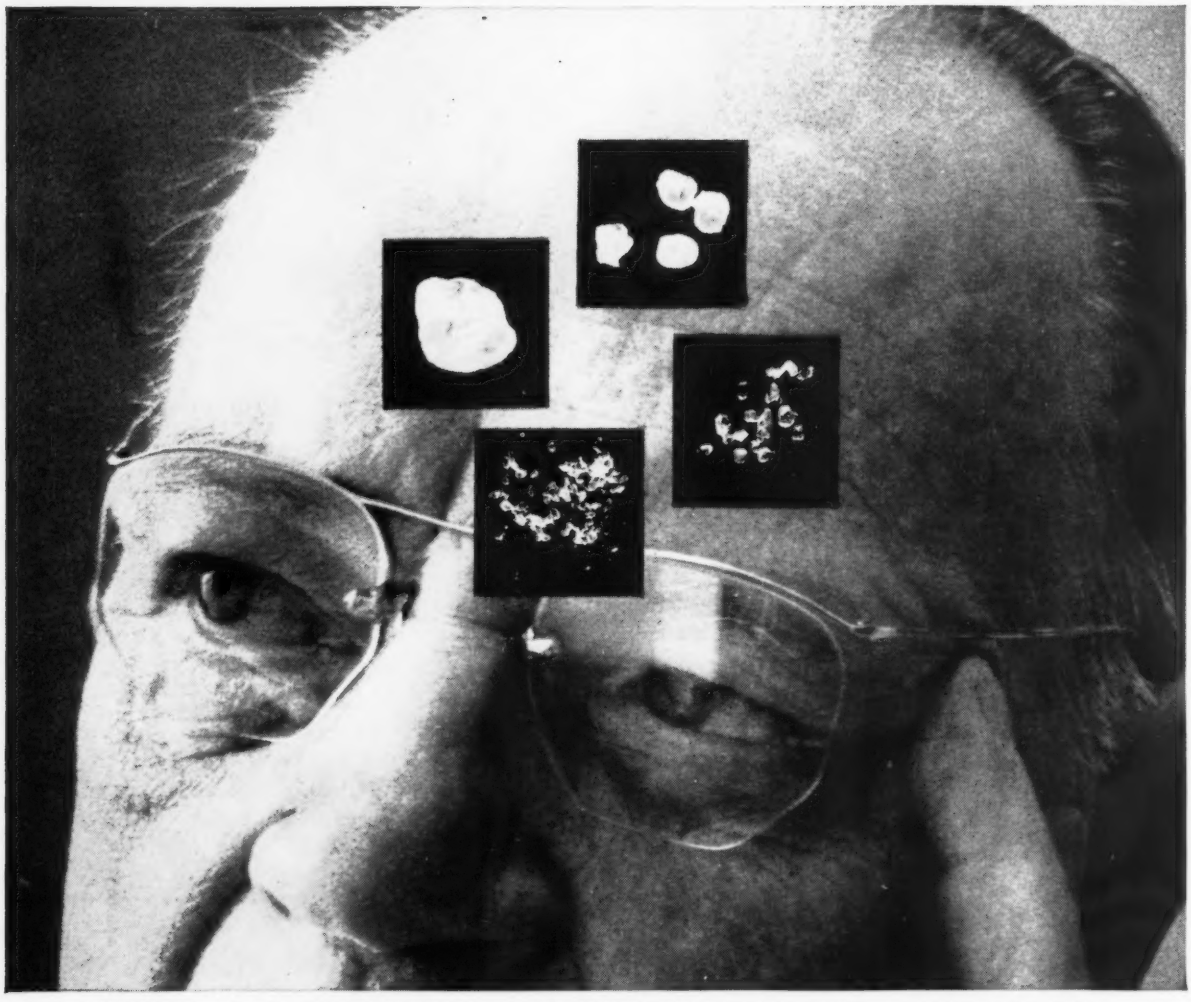


Figure 5. Influence of foam stabilizer X on volume of foam produced by foamers A and D in air-blown generator.

DOW



YOU NAME IT . . . ½-inch crystal, ¼-inch crystal, 5-12 mesh or fines (100% through 9). You get the exact size you want when you order Paradow.

Paradow in the exact size you have in mind

PLAIN TO SEE is the greater clarity of Paradow when compared to ordinary paradichlorobenzene. Less fragmentation is the chief result.

Other important advantages: improved crystal structure, less fragmentation, greater clarity

Your guesswork on sizes is over—when you specify Paradow®!

That's because Paradow (Dow paradichlorobenzene) offers just the size for every use, and here they are: ½-inch crystal . . . ¼-inch crystal . . . 5-12 mesh . . . fines (100% through 9 mesh). The dependability of these sizes gives a distinct advantage to repackagers and block manufacturers alike.

Then there is the improved needle structure of Paradow. This better structure is obvious to the naked eye. Simply compare Paradow with any other—you'll quickly notice its greater clarity. This means there is less trapped air, less possibility for breakage into fragments.

Contact your nearest Dow sales office or THE DOW CHEMICAL COMPANY, Midland, Michigan, Dept. OC 852 F-1.

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Quality Tested

For no-rub waxes with greater shelf-stability

plus *gloss scuff resistance durability leveling anti-slip*

#65 *Refined white **shellac***

Leading manufacturers of water emulsion waxes and polishes have adopted Mantrose shellac because of its high quality, uniformity and stability.

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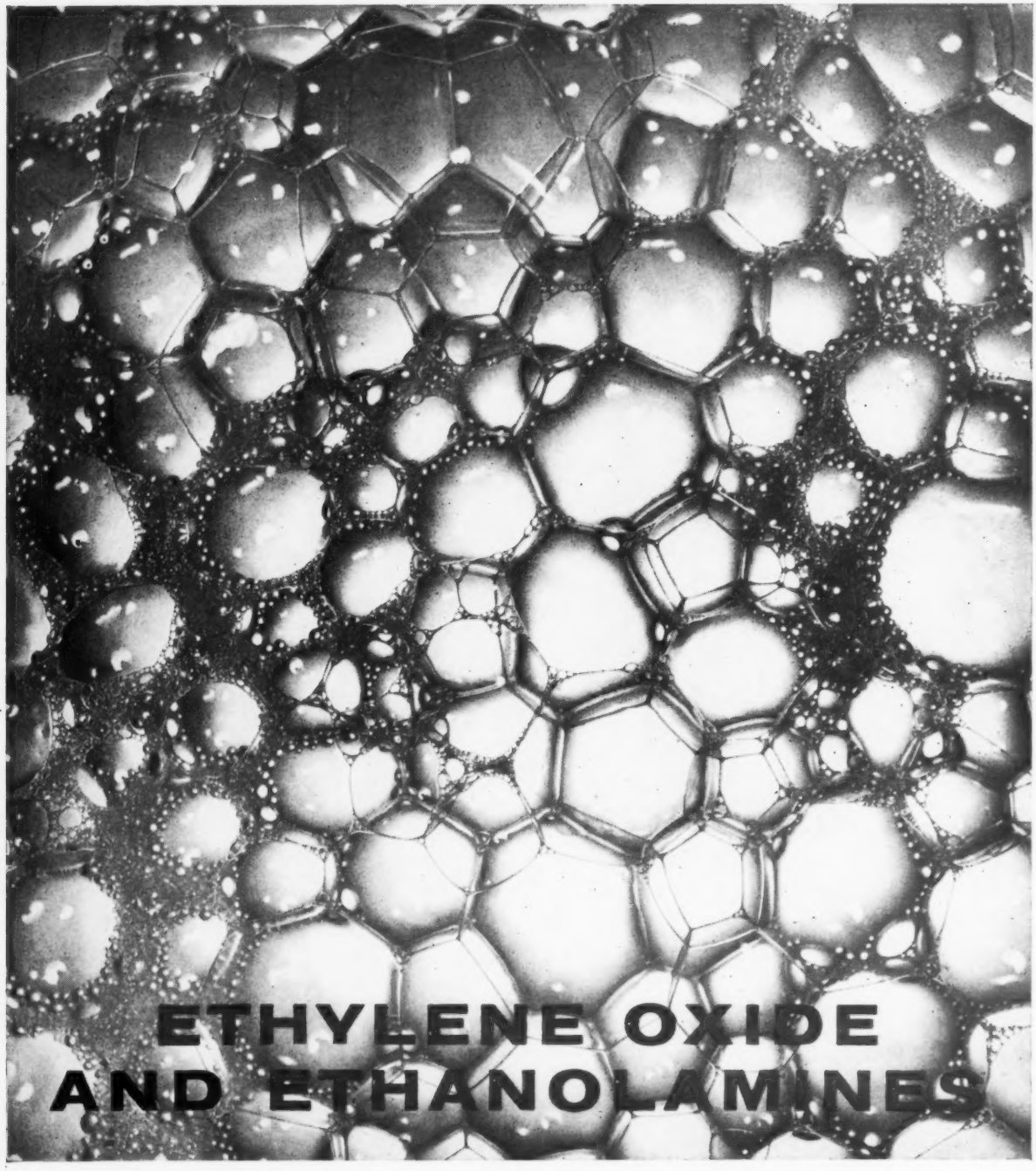
Allied Basic Chemical Co. Toronto 12, Canada
J. A. Castro Havana, Cuba
C. M. Durbin Company Cincinnati, Ohio
O. L. West Wynnewood, Pa.
J. H. Hinz Company Cleveland 13, Ohio
Harry Holland & Son, Inc. Chicago 6, Ill.
R. L. Kelley Danbury, Conn.
J. M. Washburn Co. Arlington 74, Mass.
H. C. Ross Burbank, Cal.
E. M. Walls Company San Francisco, Cal.
Harry Holland & Son, Inc. Detroit 38, Michigan



Need ethylene oxide or mono-, di-, or triethanolamine? Allied's Orange, Texas plant—most modern in the industry—can supply you with oxide and amines consistently above standard specifications. Shipments available in tank cars, tank trucks or 55-gallon drums from the plant. Amines also available for delivery in tank trucks and 55-gallon drums from nationwide stock points. Write for samples, quotations, literature, technical service with no obligation.

Dept. EO-EA-1-27-4

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News

Joins Hollingshead

Charles W. Longstreth has been appointed sales representative for the industrial division of

Charles W. Longstreth

R. M. Hollingshead Corp., Camden, N. J., it was announced recently by R. W. Malcolm, Jr., sales manager. Mr. Longstreth will assist present Hollingshead representatives in the Southern California, Nevada, Utah, Colorado and Arizona areas.

Mr. Longstreth comes to Hollingshead with a wide range of experience in the sales of maintenance chemicals. He has held positions as sales manager with Englander Co., and as a division buyer for Sears Roebuck & Co. An alumnus of Ohio State University and Bliss College, Mr. Longstreth is an active member of the Arizona Public Health Association and is also affiliated with the Elks.

★

"Lysol" Advtg. Campaign

Lehn & Fink Products Corp., New York, will embark on an intensive 10-month advertising campaign in Sept., emphasizing the use of "Lysol" disinfectant as a feminine hygiene aid, it was announced recently by O. G. Kennedy, general manager. The campaign will be conducted primarily in consumer magazines and supplements an already extensive magazine advertising program stressing the use of the product as a general household disinfectant and cleansing agent.

★

Warning Label Manual

A guide for the preparation of warning labels for hazardous chemicals has been published by Manufacturing Chemists Association, Inc., 1625 Eye Street, Washington 6, D. C., it was recently announced. The manual, in its fourth edition, has been prepared by the labels and precautionary committee of the association. Copies, which were sent free to association members, are available for $1.00.

★

New Fuld Catalog

A new catalog, listing, describing and giving price information on its line of chemical specialties, has been published by Fuld Brothers, Inc., 702 South Wolfe St., Baltimore 31, Md., it was announced recently by Melvin Fuld, president. In addition, the catalog, printed in color, gives full information on product properties, uses - and - use data. It also offers helpful hints on selling sanitary chemicals and maintenance products. Copies are available upon request.

★

Burris Incorporates

Charter of incorporation has been granted Burris Products, Inc., Charleston, S. C., to manufacture insecticides, chemicals, acids, and distribute same. A capital stock of $100,000 was listed. The corporation is headed by A. A. Burris, president.

★

Appoints Plowfield

Walton-March Co., Highland Park, Ill., announced last month the appointment of Bill Plowfield, Philadelphia, as eastern seaboard representative. Mr. Plowfield will handle all Walton-March products including "Ice-Foe," an ice and snow melting chemical, and "NSC," a non slip coating for industrial and institutional use on concrete, wood, metal and tile.

★

Brooks to Penick

Ivan C. Brooks has joined the research staff of S. B. Penick & Co., New York, as research entomol-

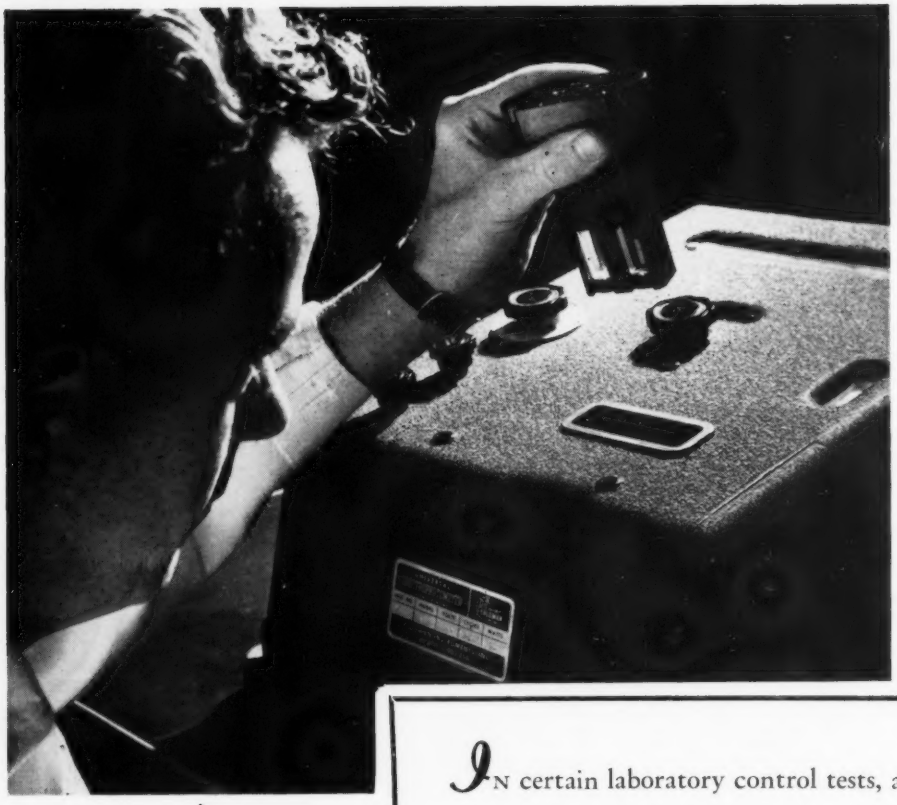
Ivan C. Brooks

ogist, it was announced recently. He will work in the firm's agricultural chemicals and pesticides unit. A graduate of Iowa Wesleyan College and Purdue University, Mr. Brooks hold a M.S. degree in entomology. He was in charge of entomological work for Diversey Corp., Chicago, from 1950 to 1956 at which time he became an independent consultant.

★

New Shell Insecticide

A new chemical insecticide, designed to repel insect attack, has been introduced by Shell Chemical Corp., New York, it was announced recently. The product, tradenamed "Phosdrin," is a systemic type insecticide to control certain insects that attack fruit and vegetable crops, and for which experimental agricultural label acceptance has been given by the U.S. Department of Agriculture. A feature of the product is its rapid rate of dissipation. "Phosdrin" can be applied to plants one to three days before harvest. By that time the insecticidal residue on the plant will have dropped below the established tolerance. "Phosdrin" will be offered for sale in emulsifiable, dust and granular forms.



In certain laboratory control tests, accurate color comparisons made against standard control samples provide an important check on the examined product's purity and quality. For all practical purposes, the spectroscopic determination is the most efficient method of making such tests quickly and accurately. This test is one of the many checks used by our Control Laboratories in their daily examination of newly arrived lots of certain essential oils and other basic raw materials before their acceptance for stock. A small detail in itself, this along with all the other rigid FRITZSCHE practices enables us to maintain the reputation we have long held for perfume and flavor specialties of fine quality and distinction.

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for INDUSTRIAL and
TECHNICAL USE

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MADE-TO-ORDER FRAGRANCES
for PERFUMES, TOILETRIES
and COSMETICS

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In New Managerial Posts

Two managerial appointments for the Texas branches of Thompson-Hayward Chemical Co., Kansas City, Mo., were announced recently by Robert S. Thompson, president. Clark Miller, who for the past nine years headed the San Antonio branch, has been named manager of the Houston office. He is succeeded by Gene Gray, who has served the company for eleven years in the capacity of sales representative in the Kansas City, Mo., area.

Clark Miller

Gene Gray

Compile Brake Fluid Laws

A loose-leaf edition of the "Compilation of Brake Fluid Laws," has been published by the Chemical Specialties Manufacturers Association, 50 E. 41st St., New York 17, N. Y., it was announced recently. The 36-page booklet, compiled by John D. Conner, association counsel, contains a complete list of states having laws and regulations pertaining to brake fluid, a list of enforcing officials, and copies of all laws and regulations. Copies, issued free to members of the association, may be obtained by non-members for $3.50.

★

Shell Honors Rysdorp

John Rysdorp, assistant treasurer and assistant comptroller of Shell Chemical Corp., New York, was presented with a diamond studded stick pin in commemoration of his thirty-five years service with Shell, at a company luncheon held last month at the Waldorf-Astoria Hotel, New York.

Mr. Rysdorp joined Shell in 1921 as a treasury department clerk in the firm's head office, then located in San Francisco. Within six years he became manager of the oil company's automotive department, and in 1929 was named manager of its Los Angeles division. He was appointed assistant to the president of the chemical company in 1941 and assistant treasurer in 1948. Later that year he came East when the company moved its headquarters to New York.

★

New Wax Stripper

Dura Wax Co., McHenry, Ill., has introduced a new concentrate wax stripper called "Dura Strip," it was announced recently. An all-purpose cleaner, the product is designed to remove wax, soap and scum from floors, walls, glasses, dishes, autos and laundry. It is offered for sale in 55 gallon drums at the price of $.68 per gallon. As an introductory offer, five gallon pails may be purchased at the drum price.

★

Onyx Cuts Quat Prices

Onyx Oil & Chemical Co., Jersey City, N. J., recently announced a reduction in price on their quaternary "BTC 84," which is a 50 percent aqueous solution of alkyl dimethyl benzyl ammonium chloride. The new price of the material is $.50 per pound.

In New Lehn & Fink Post

Robert W. Naething has been promoted to the new position of special assistant for field operations at the New York office of Lehn & Fink Products Corp., New York, it was announced recently by O. G. Kennedy, division general manager.

In his new position, Mr. Naething, former eastern regional sales manager, will handle special field sales assignments. He previously has been associated with Colgate-Palmolive Co., Safeway Stores and Fuller Brush Co. Mr. Naething is a graduate of Tuft's College where he majored in economics.

★

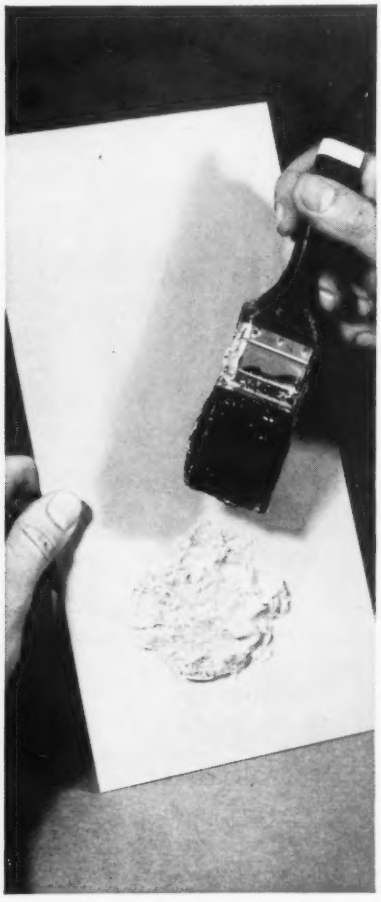
Quart Soap Dispenser

A new quart size, all metal, liquid soap dispenser, trade-named No. B6 "Likwidurn," was announced recently by American Dispenser Co., New York. The dispenser, which because of its size, eliminates frequent refilling, features a stainless steel valve located above the liquid level, thus avoiding leakage and dripping. The dispenser is chromium plated and is attached to a separate wall plate. Literature about the product is available from the firm's New York office at 115 East 23rd St., New York 10, N. Y.

Another new development using

B.F.Goodrich Chemical *raw materials*

Applying paint remover in gel form is neater . . .



Paint blisters as solvent acts . . .

Paint remover and paint wiped off—no dripping.

NOW...PAINT REMOVER DEMONSTRATES HOW CARBOPOL* THICKENS ORGANIC SOLVENTS

THIS new paint remover formulation uses Carbopol 934 to provide desired viscosity, keep the remover from "running" or dripping, cut down evaporation. Equally important, the gel is a stable system, since Carbopol has outstanding resistance to aging.

You can use Carbopol in many other organic solvent systems, as well as in water systems. This unique suspending agent improves quality in cosmetic, pharmaceutical, paint, polish, and many related compounds. For complete information write Dept. JH-5, B. F. Goodrich Chemical Company, 3135 Euclid Ave., Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

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Sanitation Show Program Details Set

MORE than 75 firms, many of them in soap, chemical specialties, or allied industries, plan to exhibit at the first International Sanitation Maintenance Show, to be held Oct. 14, 15 and 16 at the New York Coliseum, it was announced recently.

The conference will also feature guest speakers including George B. Wagner, head of the economic biology department, Pillsbury Mills, Inc., Minneapolis, who will discuss pest control, as a segment of the general conference symposium on "The Elements of Industrial and Institutional Sanitation."

Some of the products and supplies listed for exhibit include deodorants, detergents, disinfectants, dishwashing compounds, floor coverings, floor seals, floor waxes, fumigants, hand soaps and powders, liquid insecticides, scrub soaps, liquid soaps, soap powders, wax polishes and weed killers. In most cases the equipment for the application for these supplies will also be displayed.

Other speakers on the program, according to J. Lloyd Barron, National Biscuit Co., New York, the conference program chairman, include: John G. Wright, industrial hygienist, Lederle Laboratories, Pearl River, N. Y., a division of American Cyanamid Co., New York, who will speak on "Safety and Industrial Hygiene," and Albert J. Burner, Port of New York Authority, whose topic will be "Cleaning Maintenance." Also to be heard are C. J. Sweeney, Naval Ordinance Laboratories on "Selection and Use of Power Machines for Sanitation," and Robert J. Casey, Eastman Kodak Co., Rochester, N. Y., on "Mutual Aid in Purchasing Sanitation Supplies and Equipment." The show and concurrent conferences will be sponsored by the Industrial Sanitation Management Assn., Association of Food Industry Sanitarians and the National Association of Bakery Sanitarians.

A partial list of the firms who will display their products and services include:

Advance Floor Machine Co., St. Paul, Minn.; Airkem, Inc., New York; American Detergent Co., New York; American Floor Surfacing Machine Co., Toledo; Associated Just Distributors, Baltimore; Breuer Electric Mfg. Co., Chicago; Clarke Sanding Machine Co., Muskegon, Mich.; Hild Floor Machine Co., Chicago; J. I. Holcomb Mfg. Co., Indianapolis, Ind.; R. M. Hollingshead Corp., Camden, N. J.; Huntington Laboratories, Inc., Huntington, Ind.; Idico Products Co., New York; S. C. Johnson & Son, Inc., Racine, Wisc.; Lightfoot Schultz Co., New York; Multi-Clean Products, Inc., St. Paul, Minn.; Oil Specialties & Refining Co., Brooklyn, N. Y.; Scott Paper Co., Chester, Pa.; John T. Stanley Co., New York; Trio Chemical Works Inc., Brooklyn, N. Y.; Vestal, Inc., St. Louis; West Disinfecting Co., Long Island City, N. Y.; White Mop Wringer Co., Fultonville, N. Y.; C. B. Dolge Co., Westport, Conn.; Finnell System, Inc., Fort Wayne, Ind.; Franklin Research Co., Philadelphia; General Floorcraft, Inc., New York; Geerpres Wringer, Inc., Muskegon, Mich.

★

Geigy Moves from N.Y. C.

Geigy Industrial Chemicals, a division of Giegy Chemical Corp., moved last month from its offices in New York City to newly constructed offices and laboratories at Saw Mill River Road, Ardsley, N. Y. in Westchester county. The new mailing address is P.O. Box 430, Yonkers, N. Y.

The new structure includes air-conditioned administration and cafeteria buildings as well as a laboratory and service building, all of reinforced concrete with exteriors of insulated white porcelain enamel panels. Geigy is a subsidiary of J. R. Geigy, S.A., Basle, Switzerland, a chemical producer for nearly 200 years.

★

Johnson Ups Scroggins

S. C. Johnson & Son, Inc., Racine, Wis., recently announced the appointment of E. K. Scroggins, to the position of district sales manager for the firm's Atlanta-Birmingham district. Mr. Scroggins was formerly market research project manager and area sales manager in southern Texas. He succeeds Harvey J. Chapman who retired in June after 30 years with the company.

★

Neri in Reilly Post

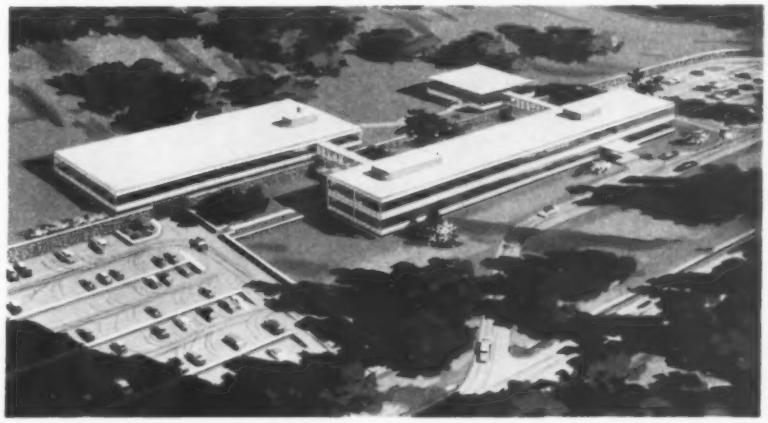
Peter A. Neri has been named manager of the Fairmont, W. Va. plant of the Reilly Tar & Chemical Corp., Indianapolis, Ind., it was announced recently. Mr. Neri replaces John B. Windsor, who has retired.

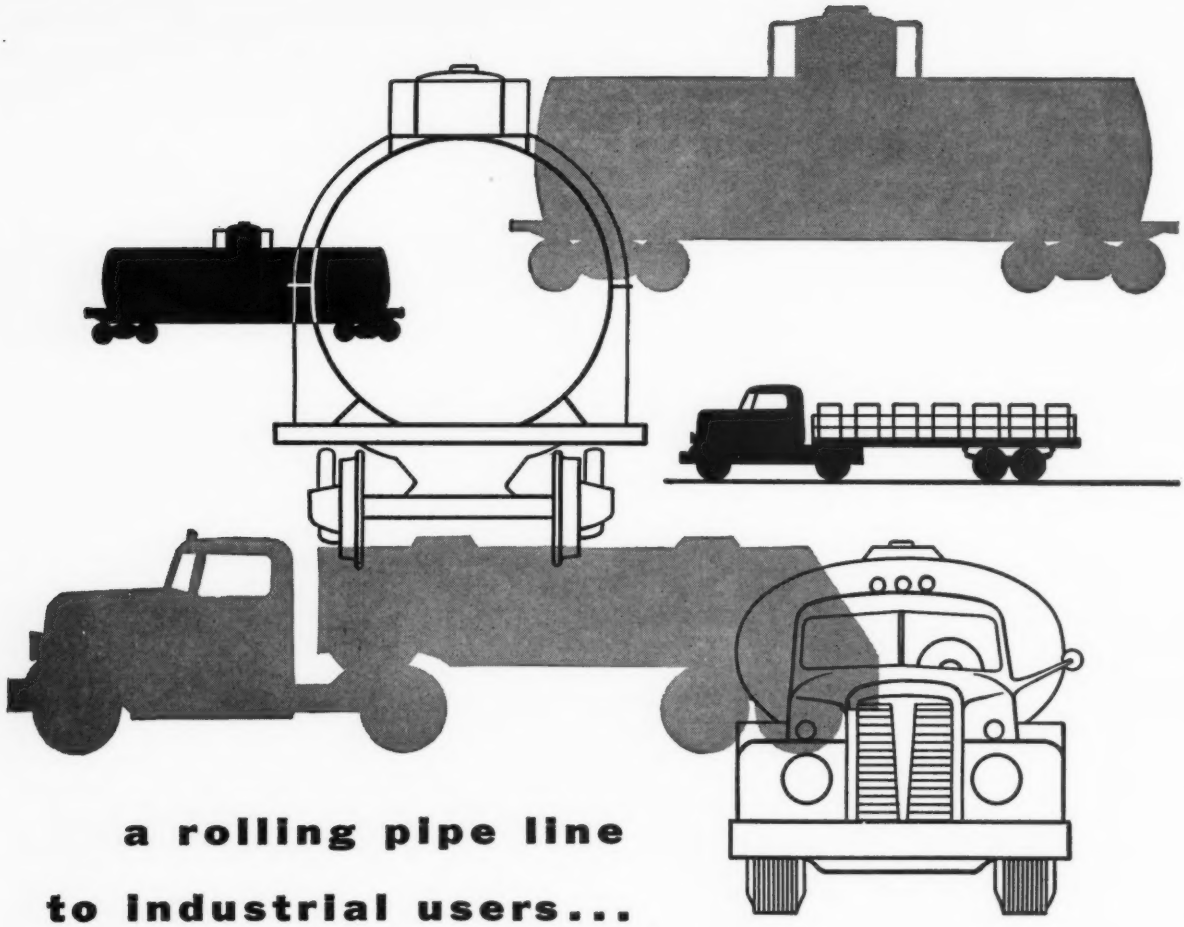
★

Ostrow Snell Treas.

Phillip B. Ostrow, former assistant secretary of Foster D. Snell, Inc., New York, has been elected treasurer, it was announced recently. A graduate of the University of Michigan, where he was elected to Phi Beta Kappa, and New York University, where he received his masters degree, Mr. Ostrow joined Snell in 1951 as chief accountant. He was elected assistant secretary in April, 1955.

New home of Geigy Industrial Chemicals, a division of Geigy Chemical Corp., on Saw Mill River Road, Ardsley, N. Y. New air-conditioned building houses company offices and laboratories. Ardsley is a suburb of New York City.





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ICC Aerosol Changes Put Off Until Dec. 1

PROPOSED amendments to Interstate Commerce Commission regulations pertaining to the shipment of aerosols, originally scheduled to be placed on the Sept. 1 ICC docket, have been held over for the Dec. 1 docket.

The two proposed amendments would, if adopted, liberalize the rules pertaining to the shipment of aerosols in interstate commerce. The changes, as written, would permit the shipment, without the red warning label, of flammable aerosols in metal containers not exceeding 32 cubic inches in capacity and under pressures not exceeding 75 pounds per square inch absolute at 70° F. Present ICC regulations call for the use of the red label when shipping flammable aerosols. In addition, the ICC regulations now call for a container size maximum of 30 cubic inch capacity and a pressure limit of 55 pounds.

The mandatory requirement for the use of the so-called "2P" container for flammable aerosols is also eliminated in the proposed amendments, which are recommended by the Bureau of Explosives of the Association of American Railroads.

The other proposed change in the ICC regulations covering aerosol shipments is a new paragraph which mentions the use of coated-glass or metal containers for shipping non-poisonous aerosol products such as soap, drugs, medicines and cosmetics.

The text of the two proposed amendments to the ICC regulations, which will be on the Dec. 1 ICC docket follow:

73.302 (a) (3): "Inside metal containers charged with a solution of materials and compressed gas or gasses, of capacity not exceeding 32 cubic inches. Contents of the container must be nonpoisonous but may be flammable as provided in S 73.300 (b) (2), (3), and (4) provided the flash point, as determined by Bureau of Explosives' Method, is not less than 20° Fahr. Pressure in the container not to exceed 75 pounds per square inch absolute at 70° Fahr. and the liquid content of the material and gas must not completely fill the container at 130° Fahr. Each completed container filled for shipment must have been heated until content reached a minimum temperature of 130° Fahr. without evidence of leakage, distortion, or other defect."

This will cancel paragraph 73.306 (b) and (d).

73.302 (a) (9): "In inside nonrefillable coated-glass or metal containers of not more than 8-fluid ounce capacity, charged with a non-poisonous drug, medicine, cosmetic, or soap and gas to a pressure not exceeding 85 pounds absolute pressure at 70° F. or 150 pounds absolute pressure at 130° F., and capable of withstanding without rupture or leakage one and one-half times the pressure at 130° F."

Note: This may become (10)

All other paragraphs in existence or now being published would remain unchanged.

—★—

Nathan Blank Dies

Nathan Blank, president and founder of Trio Chemical Works, Inc., Brooklyn, died Aug. 20. Mr. Blank, 68, had been active in the chemical specialties manufacturing firm until the last few months. He is survived by his widow, Mrs. Minnie Blank; two sons, Milton, secretary-treasurer of Trio, and Harold, vice-president of the firm.

Scale Removal

(*From Page* 44)

systems.

This physical action is capable of high efficiency since the cleaning compound may be left in the cooling system for prolonged periods of time. The material produced by the United Chemical Company of New Mexico acts as a corrosion inhibitor when left in the system.

The use of such compounds is practically mandatory when the use of aluminum finned radiators becomes commonplace. Aluminum cannot be soldered with the conventional lead-tin solder. A zinc-lead solder is required. This alloy has a much higher melting point than the conventional lead-tin solder and therefore the zinc alloy must also be used to seal the seams of the copper or brass core tubing.

Zinc and zinc alloys are rapidly corroded by acid or by alkaline solutions. Both the acid and the caustic cleaners now in use have proven quite corrosive to the aluminum solder.

United's compound has proven to be safe and effective and points the way toward future development of the neutral cleaning agents which will soon be mandatory for automobile cooling systems.

Engine Degreasers

(*From Page* 50)

sensory responses.

We anticipate that toxicity evaluation programs of potential degreaser components will be greatly increased to keep up with industry's demands for alternate substances.

It is our opinion that the most promising lines of future research are along the following approaches, viz. —

1. Development of water soluble concentrates containing solubilized grease cleaning solvents.

2. Ready-to-use emulsions that will invert as the water phase evaporates and be capable of being re-emulsified by a high pressure water spray.

3. Increased application of relatively non-toxic halogenated solvents such as methylene chloride and methyl chloroform and the fluorinated aryl and alkyl derivatives with due regard being given to the possible deleterious action of these solvents on engine parts and accessory equipment.

4. Continued investigatory studies of corrosion inhibition systems for protection of white metals such as aluminum and magnesium. A significant increase in the use of these materials which are prone to rapid attack when coupled to ferrous metals could force a complete reappraisal of degreaser formulations or create an immediate need for more effective inhibitors.

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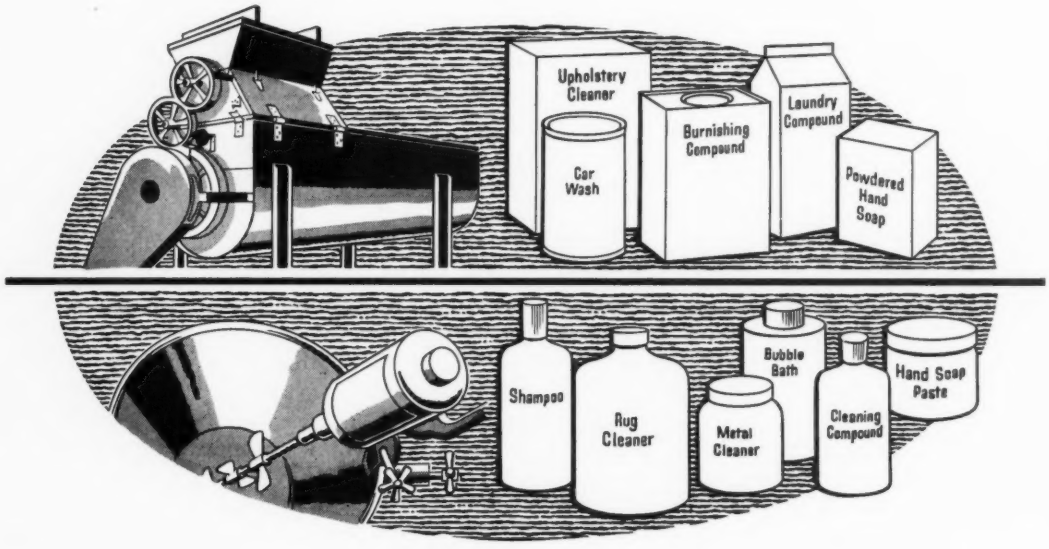
Chemical-Specialty Manufacturers Depend On Colgate-Palmolive Quality Ingredients To Make Their Products



For many years, Chemical-Specialty and Toilet-Goods Manufacturers have depended on Colgate-Palmolive for quality ingredients.

Now, and in the future, you can look to Colgate-Palmolive as a source of quality soaps and synthetic detergents for use in the manufacture of your products.

Write today to our Industrial Department for samples and technical data. *There's no cost* or obligation!

Or, get in touch with your local C.P. Industrial representative.

FREE! New 1956 Handy Soap and Synthetic Detergent Buying Guide. Tells you the right product for every purpose.

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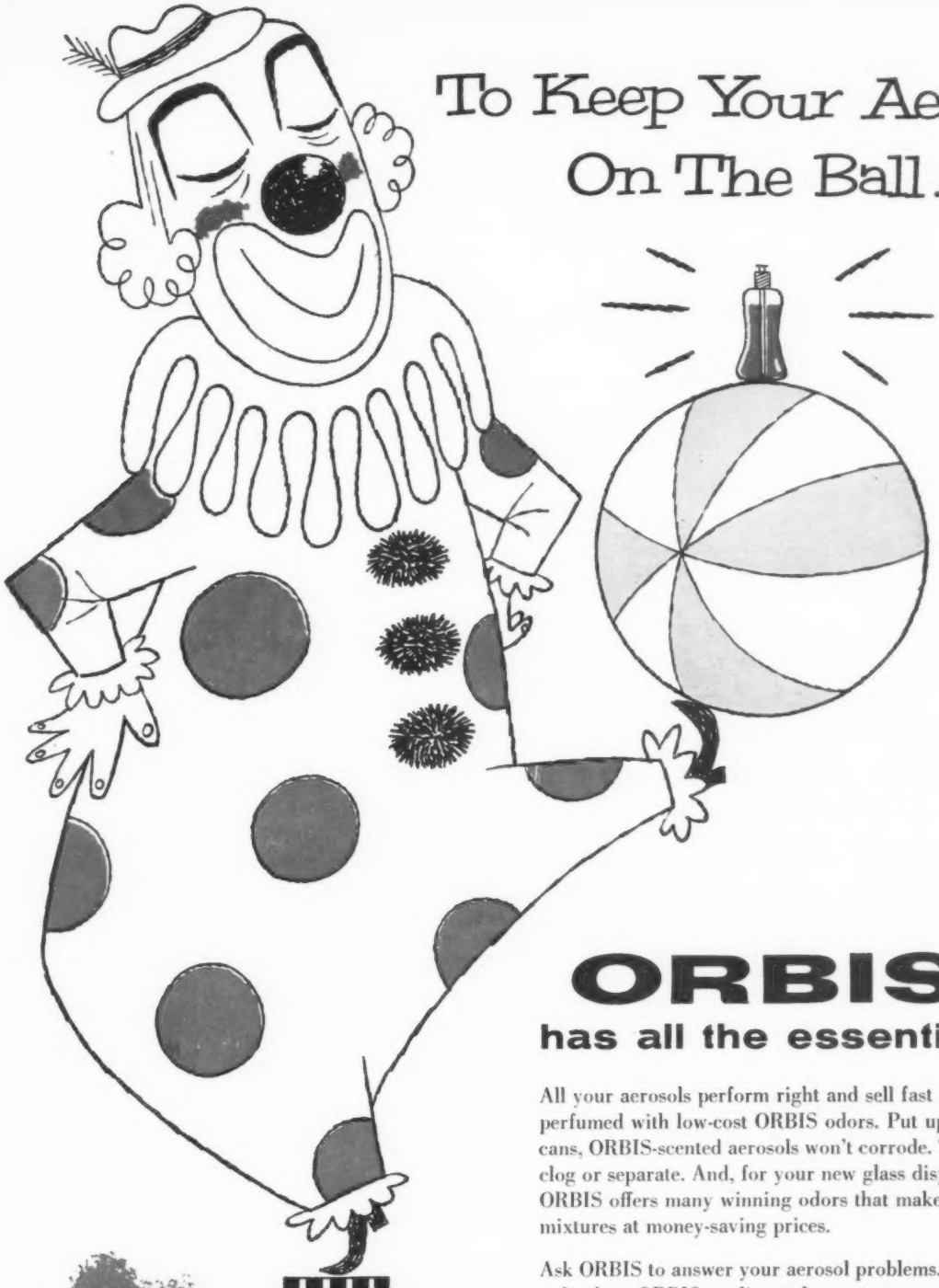

To Keep Your Aerosol On The Ball...

ORBIS
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All your aerosols perform right and sell fast when perfumed with low-cost ORBIS odors. Put up in pressure cans, ORBIS-scented aerosols won't corrode. They won't clog or separate. And, for your new glass dispensers, ORBIS offers many winning odors that make clear, uniform mixtures at money-saving prices.

Ask ORBIS to answer your aerosol problems. Discover today how ORBIS quality and economy can steadily increase your good profits from good products.

ORBIS has all the essentials

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NEW YORK

NEW YORK
CHICAGO
BOSTON
MEMPHIS

Cleaner, Polish Census

(*From Page* 40)

794,000 in '54; and wall paper and window shade cleaners which showed a decrease in sales to $16,155,000 in 1954 from $16,398,000 in 1947.

Sales of polishing preparations and related products advanced as a group in total value of sales from $110,147,000 in 1947 to $225,767,000 in 1954 for an increase of more than 100 percent. In this category sales of most individual products also rose. Floor polish sales increased from $36,057,000 in 1947 to $69,029,000 in 1954. Furniture polish sales moved up to $17,129,000 in 1954 from a 1947 total of $7,258,000. Automobile cleaners tripled their 1947 sales figure of $7,526,000 with a 1954 total of $22,152,000.

All forms of floor polishes and waxes gained in 1954, compared with 1947. Water emulsion type floor waxes, single largest product in the category, also chalked up the largest gains. Sales in 1954 were $69,029,000 on 37,404,000 gallons, as against $36,057,000 and 20,404,000 gallons in 1947. Paste wax was up from 18,255,000 pounds, worth $6,324,000 in 1947 to 22,180,000 pounds with a sales value of $6,642,000 in 1954.

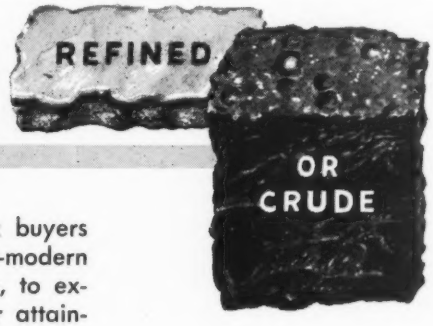
Sales of other than white paste shoe polish increased substantially between 1947 and 1954, the sales totals being $5,064,000 and $10,637,000, respectively. Sales of liquid other than white shoe polishes and cleaners and white liquid and paste shoe polish fell in 1954 from the figures reported in 1947. In the case of white shoe polishes and cleaners the 1954 sales totals were about 50 percent under those of 1947. Although total volume in quantity of liquid other than white shoe polishes and cleaners was down in 1954 (1,783,000 gallons) from 2,309,000 gallons in 1947, dollar sales volume was up sharply to $9,429,000 two years ago, as compared with $6,341,000 in 1947.

Sales volume of alkaline detergents in 1954 was about double the 1947 figure. Two years ago, according to the census figure value of alkaline detergent sales was put at $73,660,000, as against $36,488,000 in 1947.

Establishments in the industry increased by 11 percent from 1,038,000 to 1,150,000 in the period covered by the census. Employment increased from 15.4 thousand to 19.4 thousand from '47 to '54, while the industry's payroll in that period rose from 48.3 to 85 million dollars, an increase of 76 percent. Production workers earned 82 percent more in 1954 than in 1947, with their number up 27 percent and man hours worked 20 percent greater.

Value added by manufacture in the industry amounted to $287 million in 1954, an increase of 110 percent over the 1947 figure of $136.6 million. Cost of material, fuel, electricity and contract work; value of shipments; and capital expenditures (new) in the indus-

WAX FROM RIVER PLATE MEANS HIGHEST QUALITY



NEWS travels fast in a specialized field. More and more wax buyers are "sold on" River Plate. Those who checked up on our most-modern refinery facilities and subjected our results, over repeated orders, to exacting analyses are fully convinced of our dependability and our attainment of extraordinary quality.

As leaders in the refining and bulk import sales of wax, we recognize our responsibilities. The growing confidence of important users testifies to the quality and values we deliver.

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VEGETABLE and ANIMAL WAXES
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Table 2. General Statistics for the Cleaning and Polishing Preparations Industry (S.I.C. Code 2842), by Regions and Selected States: 1954 and 1947

Region and State[1]	1954										1947*	
		All employees		Production workers			Value added by manufacture[2]	Cost of materials etc.[3]	Value of shipments[4]	Capital expenditures, new	All employees, number	Value added by manufacture[2]
	Establishments, number	Number	Payroll	Number	Man-hours	Wages						
			($1,000)		(1,000)	($1,000)	($1,000)	($1,000)	($1,000)	($1,000)		($1,000)
United States total[5]	1,150	19,359	85,049	11,569	22,368	38,223	287,013	272,865	559,870	12,740	15,387	136,602
New England	130	2,104	9,982	1,042	2,095	3,576	24,916	22,070	46,987	2,198	2,507	16,446
Massachusetts	89	1,394	6,446	684	1,353	2,398	17,951	15,786	33,738	572	2,101	13,315
Middle Atlantic	313	5,641	22,356	3,631	7,034	11,323	69,521	78,646	148,169	1,788	4,729	48,862
New York	165	2,494	9,498	1,698	3,240	5,124	32,628	31,314	63,942	506	2,526	27,711
New Jersey	84	2,329	9,876	1,395	2,796	4,498	30,064	39,020	69,085	941	1,360	16,145
East North Central	285	6,399	31,064	3,802	7,493	13,749	132,303	110,813	243,116	5,916	4,561	(D)
Illinois	97	1,751	8,078	1,131	2,319	4,043	33,813	30,401	64,214	(D)	1,783	(D)
West North Central	102	1,419	6,173	856	1,588	2,917	20,272	26,565	46,839	785	919	(D)
Missouri	51	1,109	4,964	641	1,241	2,372	17,832	24,500	42,333	563	537	3,352
South and West	320	3,794	15,473	2,235	4,154	6,653	39,996	34,768	74,757	2,049	5,671	(D)

*Revised.

D Withheld to avoid disclosing figures for individual companies.

[1]Each producing State not shown separately has been withheld either (a) to avoid disclosing figures for individual companies; or (b) because the State had less than 1,000 employees in the industry. (Additional publishable detail will appear in the final Census bulletin for this industry.)

[2]For 1954, value of shipments less cost of materials, supplies, fuel, electric energy, and contract work. For 1947, estimated value of production was used in the calculation, in place of value of shipments. If the 1947 value added figure had been calculated on the basis of value of shipments (rather than estimated value of production, as was the case), the 1947 "value added by manufacture" for this industry would have been $136.2 million.

[3]Includes cost of materials, fuel, electricity, and contract work, excludes cost of products bought and resold in the same condition.

[4]Includes, for all establishments classified in this industry, not only (a) their value of products "primary" to the industry, but also (b) their value of "secondary" products, which are primary to other industries, and (c) their "miscellaneous receipts" for repair work, sales of scrap, installation of own products, etc. Excludes sales of products bought and resold in the same condition.

[5]Sum of regional figures may not equal U.S. total, due to independent rounding.

try, increased 113, 112 and 31 percent, respectively.

The 1954 Census of Manufactures is the 26th such census in the United States since 1809. Present legislation provides for a Census of Manufactures every five years with the next one scheduled to cover 1958. The advance report (C-28-4.2) on the cleaning and polishing preparations industry, is available for 10 cents from the Bureau of the Census, Washington 25, D.C., and from U.S. Dept. of Commerce field offices.

The cleaning and polishing preparations industry is defined by the advance report as manufacturing establishments engaged primarily in the manufacture of cleansers, washing powders and washing compounds and which are not engaged in manufacturing soap. Establishments engaged in manufacturing dry-cleaning preparations, metal, automobile, stove, shoe and other polishes; paint and varnish removers; waxes, stains, finishes and dressings for fabricated leather and other materials; burnishing inks and related products are also included in the industry.

More detailed figures on this industry will appear in the Census Bulletin, MC-28D, entitled "Soap, Glycerine; Cleaning, Polishing and Related Products," which will be published, and offered for sale, at a later date by the Superintendent of Documents, U. S. Government Printing Office.

Mandatory Labeling

(*From Page* 153)

be stated as a part of the direction for use (which may appear in the labeling) or whether they should be contained in a separate warning and caution statement which must appear on the label. Frequently it makes more sense for these precautions to be included as a part of the directions for use and my conversations with officials of the Department of Agriculture indicate that they favor their inclusion as a part of the directions for use. Nevertheless, there may be circumstances under which it is necessary also to include these precautions in the form of a separate warning or caution statement. For example, the warning and caution statements suggested in Interpretation 17 for use on the label of 2, 4-D products are separate and distinct from the directions for use.

The case of McClannahan v. California Spray-Chemical Corporation is an example of an instance in which a separate warning and caution statement relating to the possibility of foliage injury would have been helpful. That case was premised upon injury to an apple orchard arising from the use of a mercurial fungicide. It was applied by the grower at a period later than recommended in the directions for use. In its decision upholding the liability of the company, the Supreme Court of Appeals of Virginia indicated a belief that the label of the product should have contained a warning or caution statement advising the user of the possibility of injury if the product was applied contrary to the directions for use.

Cuts Lens Cleaner Price

A reduction in the price of its "Sight Saver" lens tissue and the availability of a new type dispenser were announced recently by George E. Marx, manager of consumer products sales for Dow Chemical Corp., Midland, Mich. A 10-cent cut will reduce the price of the 800 tissue refill pad to $1.25. Greater price reductions were also announced for volume purchases. The new snapdown type "Sight Save" dispensers, valued at $2.50, are available free to purchasers of the silicone treated tissues.

★

Chas. A. Warner Co. Moves

Charles A. Wagner Co., Philadelphia chemical dealer and distributor, recently announced the transfer of its offices to its new plant at 4455 North 6th St., Philadelphia 40, Pa. The new location will furnish Wagner with an enlarged warehouse, providing a total area of 23,000 feet, and served by a three-car railroad siding.

Disinfectants Are Different Now.

Changes are taking place all the time in disinfectant and sanitizer formulating, and performance testing. The eighth edition of the Methods of Analysis of the AOAC includes comparatively new tests for disinfectants, makes changes in others. New ingredients call for new methods of establishing claims.

Your product may require new proofs of effectiveness—and if it measures up to new test requirements, you may have a plus value for promotion.

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Hercules Expands Plant

Plans for an extensive addition to production facilities at its oxychemicals plant in Gibbstown, N. J., were announced last month by the Hercules Powder Co., Wilmington, Del. The expansion program will involve doubling the production capacity of para-cresol, a raw material for production of antioxidants, and its derivatives, chemicals used in the production of essential oils. A previously announced addition at Gibbstown, for the production of three-million pounds of para-cresol annually, together with its conversion to di-tert-butyl-para-cresol (butylated hydroxytoluene), is scheduled for completion later this fall. Under the new expansion program, the capacity of this unit will be increased to six million pounds of para-cresol annually. The production capacity of di-tert-butyl-para-cresol will also be doubled. Hercules also revealed that the company has under development a new antioxidant, using para-cresol as one of the basic raw materials.

★

Carbide Office Relocates

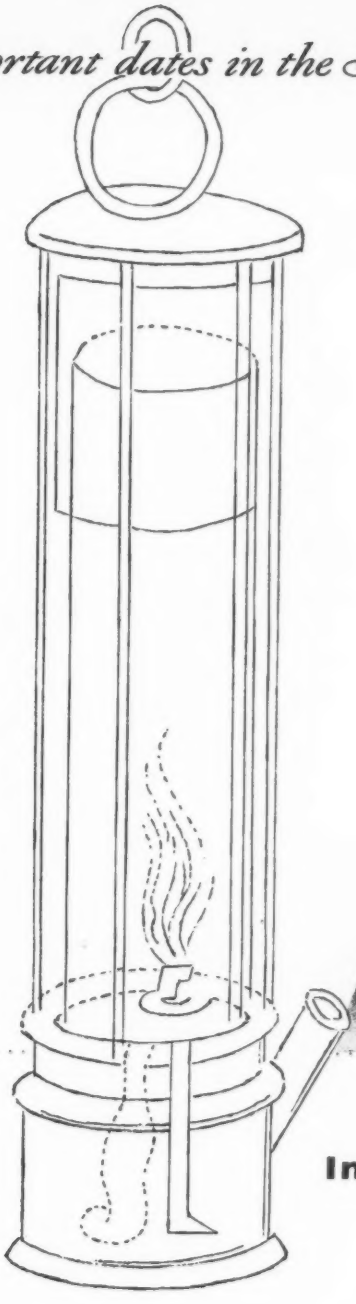
Carbide and Carbon Chemicals Co., New York, announced last month the relocation of its New York sales office at 100 East 42nd St., New York 17, N. Y.

★

CSMA Buyers' Guide

Chemical Specialties Manufacturers Association, New York, recently announced plans for publication of the 1957 edition of "Vendors To The Trade," a buyers' guide and directory, listing members who sell their products or services to the trade. The guide, published last year for the first time, will consist of two sections, an alphabetical classified listing of members by products and services, and a further description of products and services in addition to the alphabetically arranged company name, address and telephone number. Charge for the listing is $15.00. Requests should be mailed to CSMA, Inc., Chemists' Building, 50 East 41st St., New York 17, N.Y.

Important dates in the History of Industrial Progress



1816

In mining . . .

For English coal miners whose output fueled the Industrial Revolution, Sir Humphrey Davy's invention of the miner's safety lamp greatly lessened the hazards of their occupation. Fewer mine disasters meant more coal for Britain's infant industries.

In the history of fats and waxes

GROCO 55 — TRIPLE PRESSED STEARIC ACID

Titre	54.5°-55.2°C.
Titre	130.1°-131.4°F.
Color 5¼" Lovibond Red	0.5 max.
Color 5¼" Lovibond Yellow	1.5 max.
Unsaponifiable	0.05% max.
Saponification Value	208 – 212
Acid Value	207 – 211
Iodine Value (WIJS)	4.0 max.

Chevreul, who gave us our modern concept of fatty substances, observed early in his work that the solid acid isolated from mutton tallow had a higher M.P. than that obtained from pork fat. This observation culminated in the preparation of stearic acid in 1816. Since that time stearic acid has become a vital raw material for many products, including candles, cosmetics, buffing compounds, textile softeners, food emulsifiers and pharmaceuticals.

In 1837, A. Gross & Company entered the infant fatty acid field and has since pioneered in the improvement of refining techniques for these materials. Specifications for GROCO 55 — TRIPLE PRESSED STEARIC ACID show at a glance the high purity and stability characteristics which have been built into the best stearic acids of today.

Send for samples and catalog "Fatty Acids in Modern Industry."

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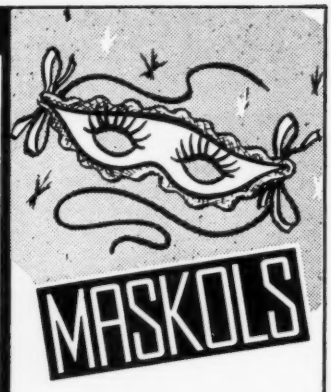

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Hercules Reassigns Yates

Richard T. Yates, manager of the agricultural chemicals division, naval stores department of

Richard T. Yates

Hercules Powder Co., Wilmington, Del., has received a special assignment to investigate new fields of chemistry in which the company is interested, it was announced recently. P. J. Reno, sales manager of the agricultural chemicals division, will succeed Mr. Yates as division manager.

Mr. Yates joined Hercules in 1929, as a chemist, after graduation from Virginia Polytechnic Institute with a B.S. degree in chemical engineering. Later, he was transferred to the firm's naval stores department and, in 1940, was named manager of the department's domestic sales. He was appointed assistant director of sales in 1945. When Hercules established an agricultural chemicals division in 1954, Mr. Yates was named manager. Previously he had played a major role in the development and sales of the firm's insecticide, toxaphene.

Mr. Yates is chairman of the policy committee of the National Agricultural Chemicals Association, and a member of the Chemical Specialties Manufacturers Association, the Armed Forces Chemical Association, and the National Federation of Sales Executives.

Mr. Reno, a graduate of the University of Mississippi, joined Hercules in 1941 in the sales division of the naval stores department. In 1948 he was named manager of the firm's sales office in Dallas where he served until earlier this year when he was appointed sales manager of the agricultural chemicals division.

P. J. Reno

—★—

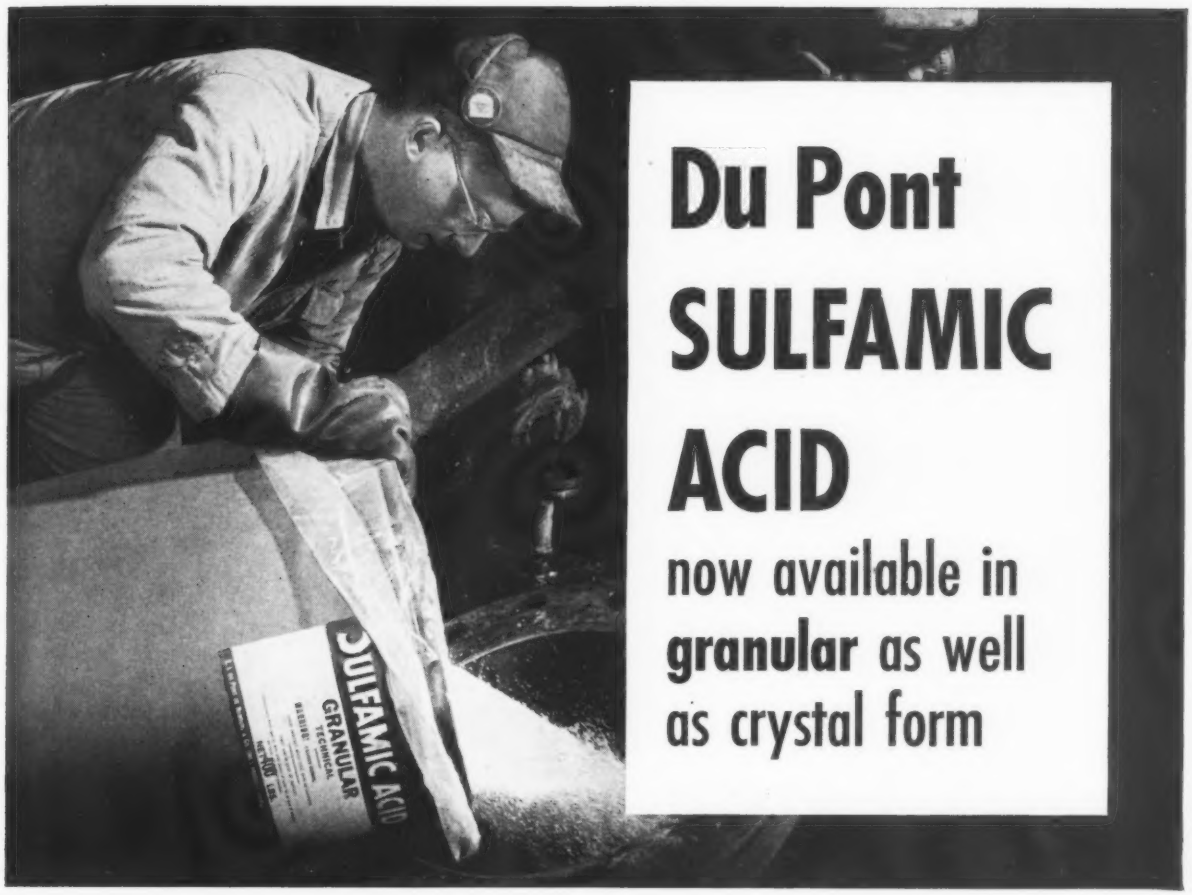
Edwards Huntington Rep.

Frank J. Edwards Co., New York, has been named sole sales representative for Huntington Laboratories, Inc., Huntington, Ind., in the New York area it was recently announced. Edwards will handle Huntington's line of chemical and maintenance specialties. The line includes floor seals and dressings, liquid soaps, scrubbing and cleaning compounds, disinfectants, deodorants and insecticides, plus the equipment for the application or dispensing of these products. Huntington also has a plant and office in Philadelphia and offices in Toronto. The territory covered will include the five boroughs of New York City, all of Long Island and the counties of Westchester, Putnam and Rockland.

—★—

Moore Appoints Schultz

John B. Moore Corp., Nutley, N. J., has announced the appointment of Norman R. Schultz, as sales representative on the west coast. Mr. Moore will be responsible for sales of the firm's cleaning solvents in Oregon and Washington. Prior to joining Moore, Mr. Schultz served as an electrical engineer with Boeing Aircraft, Seattle.



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now available in **granular** as well as crystal form

Unbeatable for formulating scale removers and acid-type cleaners

The new free-flowing . . . non-caking granular sulfamic acid is another advance in the production of practical, easy-to-handle efficient acid cleaners. Sulfamic acid will handle the toughest cleaning job. Whether you are producing cleaners for copper-bottom pans, air-conditioning equipment, or boilers, sulfamic acid enables you to produce a cleaner that will do it fast, safely, and economically *without fumes*. And metal corrosion is easily controllable in sulfamic-based cleaners.

What's more, sulfamic acid eliminates special-handling procedures . . . glass breakage or acid-spilling damage . . . expense of returnable containers.

CRYSTAL GRADE. 99% active material for synthesis and chemical uses where high purity is required.

GRANULAR GRADE. A specially prepared, new, free-flowing, non-caking sulfamic acid designed for use in your formulated compounds.

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Metal Cleaners and Brighteners
Brick and Concrete Cleaners
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Sugar-Evaporator Descalers
Food-Processing Equipment
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Paper-Mill Felt and Wire Cleaners
Brewery Cleaning
Heat-Exchanger Cleaners
Marine Cleaners
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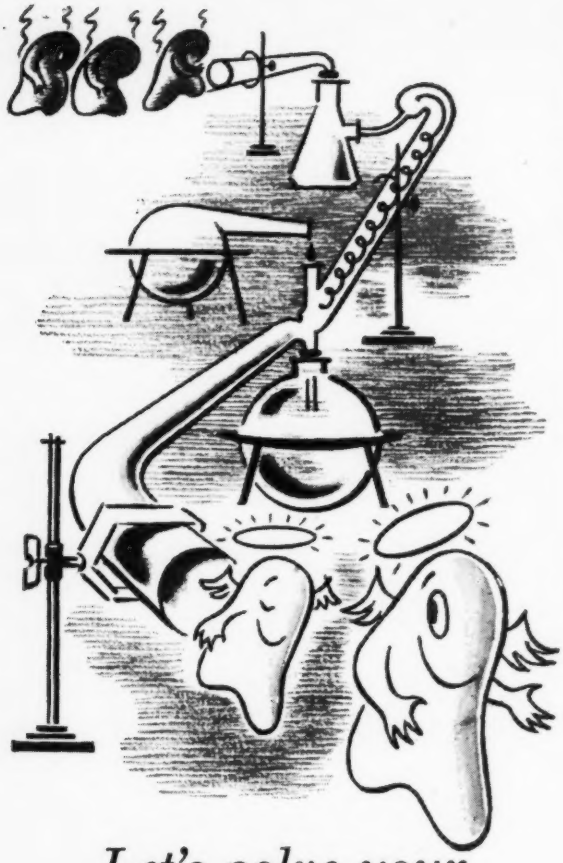

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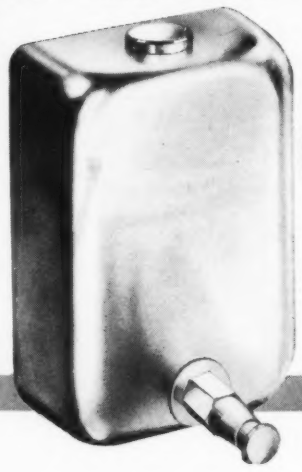

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Heavy gauge steel tank, triple plated . . . copper, nickel and the brilliant polished chrome finish. It holds 40 ounces . . . enough to serve up to thirty people for a full busy month.

Has the famous Moore Brothers valve . . . Neoprene washer equipped. No leak . . . no drip . . . no clog; and features the Moore theft-proof lock-top cap. Easy filling, of course. Takes only minutes to install with the new hidden wall bracket.

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Quality-proven Soap Dispensers and Dispensing Equipment

Union Bay Expands Plant

Union Bay State Chemical Corp., Cambridge, Mass., recently announced a $400,000 extension to its polymer emulsion plant. The addition will greatly increase the company's output of "Ubatol," "Unibac" and "Hycryl" polymers.

Expanded facilities and equipment include a reactor room housing special 1000 and 2000 gallon glass-lined reactors suspended on weighing scales; a control console which allows push button weighing, temperature stability maintenance, material flow rate control, and transfer of materials; refrigeration equipment to control reaction temperature; safety-designed bulk raw material tanks for monomer storage and intermediate tanks and scales.

All new equipment is made of stainless steel, and reactors are glass-lined, to eliminate possible metal contamination during the reaction process. The plant also has been designed with many safety features. Monomers, which are highly flammable, are stored below ground and are automatically piped into the explosion-proof reactor room. As a further precautionary measure each reactor is equipped with a rupture disk. After formulation in the plant, the finished product is automatically metered out into storage tanks, tank cars or drums for shipment.

★

Ralph N. Chipman Dies

Ralph N. Chipman, 70, former president of Chipman Chemical Co., Bound Brook, N. J., died Aug. 20, at his home in Plainfield, N. J. An authority on railway weed control, he retired in February as an official of Allied Chemical and Dye Corp., New York.

Mr. Chipman was born in Beverly, Pa., and attended the University of Pennsylvania. In 1910, he established Atlas Preservative Co. which pioneered in the weed control field. Seven years later he founded Chipman Chemical Co., Bound Brook, N. J., and was its president and manager for twenty-two years.

In 1942, Mr. Chipman became manager of the weed killer department of the General Chemical Division of Allied Chemical and Dye. He was a charter member and first president of the National Agricultural Chemicals Association. He is survived by his widow, Bernice, and a stepson, George W. Case.

★

Sets "Perthane" Tolerances

A recent ruling by the U. S. Food and Drug Administration has established tolerances for "Perthane", a new insecticide made by Rohm & Haas Co., Philadelphia. A tolerance of 15 parts per million has been set on spinach, cherries and lettuce. "Perthane" is among the least toxic of insecticides and this new tolerance, the highest established for any chlorinated insecticide to date, permits its use in late season applications.

Production Clinic

(*From Page* 89)

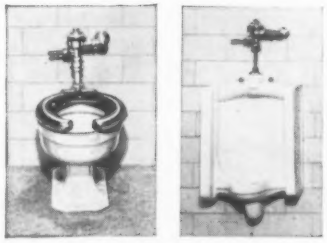
Pin holes or weak spots in tubes can be troublesome, too. Corrosion of jar caps, or an unsuitable cap liner may impart an unsightly appearance to paste or cream in a freshly opened jar.

The formation of gas usually is caused by chemical, bacterial or fungicidal reactions, the latter two being due to the absence of preservatives. Discoloration may be due to oxidation of perfume or contamination with metal.

These comments on defects in chemical specialties may be helpful in certain cases. No attempt has been made to cover all situations and supply remedies for them.

Although a good formula is essential to the success of a product, it won't necessarily guarantee freedom from development of defects during a long shelf storage life. Therefore, particularly with new products, it is important constantly to use laboratory control methods, as well as regular periodic examinations of samples over long periods of time to insure the absence of product imperfections.

QUICKLY REMOVES
stains! odors! clogging!



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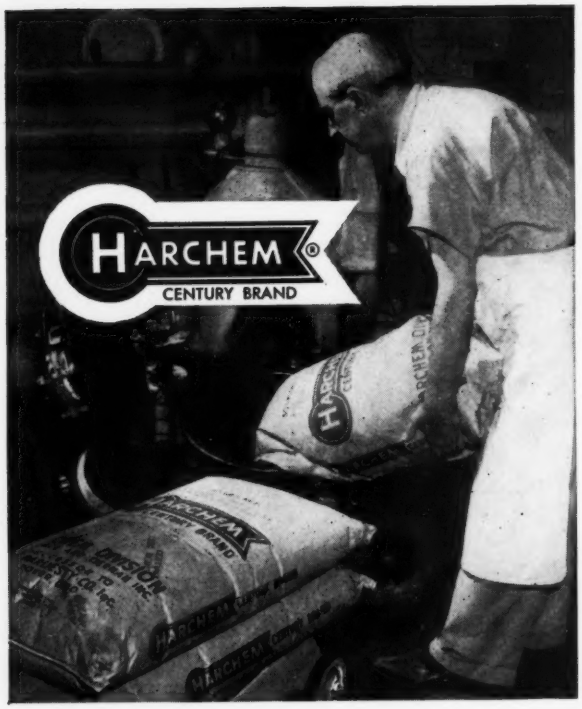

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...*CENTURY BRAND Fatty Acids*

You, as a user of fatty acids, can now insist on a uniform product, particularly adapted to your needs. The makers of Harchem CENTURY BRAND Fatty Acids recognize the need for products which are uniform and produce Harchem fatty acids by modern methods that assure continuing deliveries of products that are standardized as to purity and quality.

CENTURY BRAND, one of the oldest names in fatty acids, provides the key to uniform quality in your products. By reputation the makers of Harchem CENTURY BRAND Fatty Acids have a genuine interest in the needs and wants of their customers. Try Harchem Fatty Acids in your process. Tell us of your problem and ask for a free sample.

H-16

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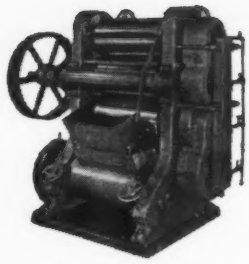

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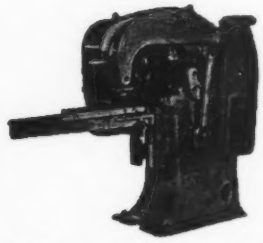

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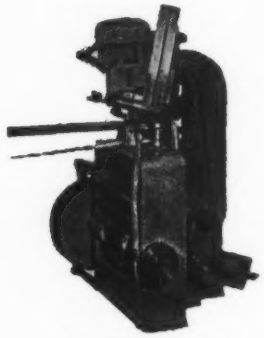

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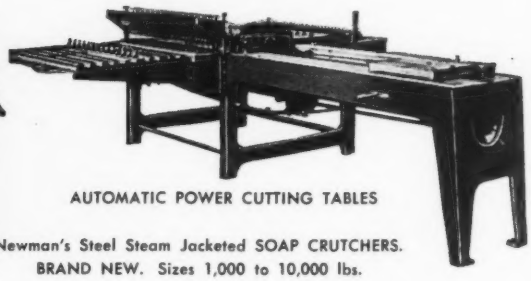

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(*Continued on Page* 191)

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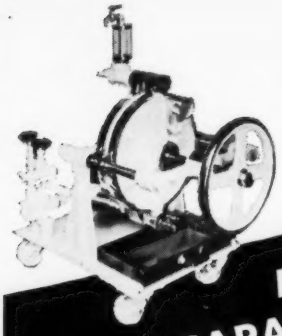

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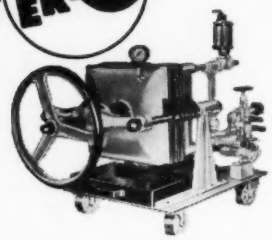

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Wanted: One copy of October 1942 issue *Soap* magazine to complete our file. (Vol. 18, No. 10). Write R. S. Yaffee, Purex Corp., Ltd., 9300 Rayo Ave., South Gate, Calif.

Standard Reference Books:
See Page 194

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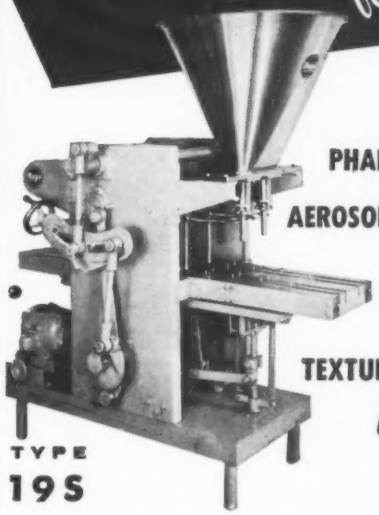

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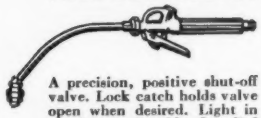

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Table II. Capacity Test

Bacteria	Temp. C°	p.p.m.	A	B	C	D	E	F	G	H
		10 ml. Germicide + 0.2 ml. Inoculum								
		2	0	0	1	1	1	1	0	0
		4	0	0	1	1	1	1	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
	20°	10	0	0	2	2	2	2	0	0
		20	1	1	3	3	3	3	0	0
		25	1	1	4	4	4	4	0	0
		50	2	2	5	5	5	5	1	0
		100	4	4	10	10	10	10	3	1
		200	7	7	10	10	10	10	4	3
		2	0	0	1	1	1	1	0	0
		4	0	0	0	1	1	1	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
S. typhosa	37°	10	1	1	2	2	2	2	0	0
		20	1	1	3	3	3	3	0	0
		25	1	1	4	4	4	4	0	0
		50	2	2	5	5	5	5	2	0
		100	3	3	10	10	10	10	3	1
		200	7	7	10	10	10	10	6	3
		2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
		10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
	5°	25	1	1	1	1	1	1	0	0
		50	1	1	2	2	2	2	0	0
		100	2	2	5	5	5	5	2	0
		200	3	3	6	6	6	6	3	0

Bacteria	Temp. C°	p.p.m.	A	B	C	D	E	F	G	H
		10 ml. Germicide + 0.2 ml. Inoculum								
		2	0	0	1	1	1	1	0	0
		4	0	0	1	1	1	1	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
	20°	10	0	0	1	1	1	1	0	0
		20	1	1	1	1	1	1	0	0
		25	1	1	2	2	2	2	0	0
		50	2	2	5	5	5	3	1	0
		100	3	3	10	10	10	6	3	1
		200	5	5	10	10	10	10	4	3
		2	1	1	1	1	1	1	0	0
		4	1	1	1	1	1	1	0	0
		6	1	1	1	1	1	1	0	0
		8	1	1	1	1	1	1	0	0
M. pyogenes var. aureus	37°	10	1	1	1	1	1	1	0	0
		20	1	1	1	1	1	1	0	0
		25	2	2	2	2	2	2	0	0
		50	2	2	5	5	5	6	1	0
		100	3	3	10	10	10	10	3	1
		200	5	5	10	10	10	10	4	3
		2	0	0	0	0	0	0	0	0
		4	0	0	0	0	0	0	0	0
		6	0	0	1	1	1	1	0	0
		8	0	0	1	1	1	1	0	0
	5°	10	0	0	1	1	1	1	0	0
		20	0	0	1	1	1	1	0	0
		25	1	1	1	1	1	1	0	0
		50	1	1	3	3	3	3	0	0
		100	2	2	4	4	4	4	1	0
		200	3	3	6	6	6	6	2	0

Iodine Sanitizers

(*From Page* 161)

sulfuric acid and a one percent solution of gluconic acid were prepared with sterile distilled water. The results are recorded on Figure VI.

(*To be concluded*)

★

Max Factor Expands

Max Factor & Co., Hollywood, Calif., has purchased all outstanding shares of Lee Limited, Beverly Hills, Calif., owner of the trade marks "Sof-Set," "Sof-Set No-Lac," and "Dri-Mist," it was announced recently. The first three products are aerosol hair spray preparations. All of these products will be manufactured, merchandised, and distributed by Max Factor's new pharmaceutical division. Previously, Lee Limited and a subsidiary of Max Factor, had been in partnership for the distribution of "Sof-Set" and "Dri-Mist."

The company's new pharmaceutical division has been recently expanded to include the handling of specialty products in addition to pharmaceuticals and will function separately from the firm's cosmetic line. It will be known as Max Factor & Co. Pharmaceutical and Specialty Division and will be headed by Alfred Firestein, a director of the company.

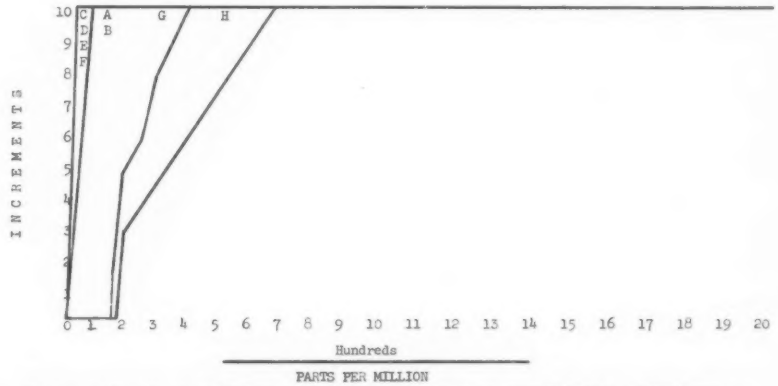
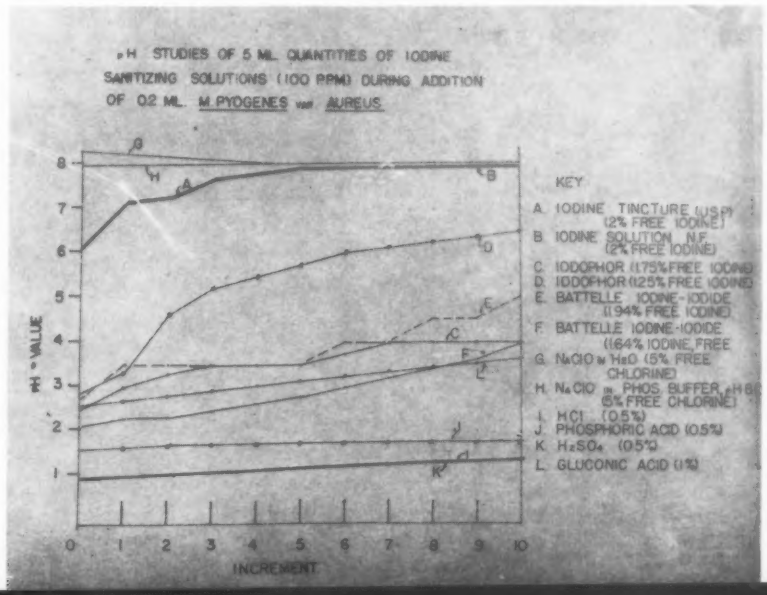


Figure V. Bactericidal efficiency of iodine sanitizing solutions — capacity testing method.
10 ml. sanitizing solution containing 1 percent whole milk + 0.05 ml. micrococcus pyogenes var. aureus.

Figure VI


pH STUDIES OF 5 ML. QUANTITIES OF IODINE SANITIZING SOLUTIONS (100 PPM) DURING ADDITION OF 0.2 ML. M. PYOGENES var. AUREUS
pH VALUE
INCREMENT
KEY
A. IODINE TINCTURE (U.S.P.) (2% FREE IODINE)
B. IODINE SOLUTION N.F. (2% FREE IODINE)
C. IODOPHOR (1.75% FREE IODINE)
D. IODOPHOR (1.25% FREE IODINE)
E. BATTELLE IODINE-IODIDE (1.94% FREE IODINE)
F. BATTELLE IODINE-IODIDE (1.64% IODINE, FREE
G. NaClO in H2O (5% FREE CHLORINE)
H. NaClO in PHOS. BUFFER, pH 6.8 (5% FREE CHLORINE)
I. HCl (0.5%)
J. PHOSPHORIC ACID (0.5%)
K. H2SO4 (0.5%)
L. GLUCONIC ACID (1%)

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Coming Meetings

American Chemical Society, 130th national meeting, Atlantic City, N. J., Sept. 16-21; division of marketing & economics, symposium on cosmetics, Sept. 20.

American Oil Chemists' Society, 47th annual fall meeting, Chicago, Sept. 24-26.

American Public Health Association, 84th annual meeting, Convention Hall, Atlantic City, Nov. 12-16.

American Society for Testing Materials, Committee D-21 on Wax Polishes and Related Materials, Washington, D. C., Dec. 10.

Association of American Soap & Glycerine Producers, 30th annual meeting, Waldorf-Astoria Hotel, New York, Jan. 23-25.

Canadian Agricultural Chemicals Association, 4th annual meeting, Sheraton Brock Hotel, Niagara Falls, Ont., Oct. 16-18.

Chemical Specialties Manufacturers Association, 43rd annual meeting, Mayflower Hotel, Washington, D. C., Dec. 3-5.

Entomological Society of America, annual meeting, Dec. 27-31, 1956, Hotel New Yorker, New York City.

International Sanitation Maintenance Show and Conference, New York Coliseum, Oct. 14-16.

National Association of Retail Grocers, Los Angeles, June 10-14, 1957.

National Motel Show, 3rd annual convention, at Morrison Hotel, Chicago, Oct. 21-27.

National Hotel Exposition, 41st annual show, Coliseum, New York City, Nov. 12-16.

National Packaging Exposition and Conference, International Amphitheatre, Chicago, April 8-11, 1957.

National Pest Control Assn., 23rd annual meeting, Sheraton-Cadillac Hotel, Detroit, Oct. 22-25.

National Sanitary Supply Association, first western regional trade show and convention, Ambassador Hotel, Los Angeles, Nov. 25-27; regional meetings, eastern, Park Sheraton Hotel, New York, Oct. 11-12; Webster Hall Hotel, Pittsburgh, Sept. 18; Ohio, Hollenden Hotel, Cleveland, Sept. 19; Hotel Statler, Detroit, Sept. 20; national trade show and convention, Conrad Hilton Hotel, Chicago, March 31, Apr. 1-3, 1957.

Packaging Machinery & Materials Exposition, Public Auditorium, Cleveland, Sept. 11-14.

Society of Cosmetic Chemists, 3rd seminar, Barbizon Plaza Hotel and N. Y. Academy of Science, New York, Oct. 4-5.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, Sept. 11, Oct. 9, Nov. 7; annual meeting and dinner, Biltmore Hotel, New York, Dec. 3.

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Tale Ends

THE boost in steel prices will be passed right down the line as far as chemical specialties and soaps are concerned. On all liquids shipped in 5 and 10 gal. steel pails and in drums for the industrial trade, —and this includes disinfectants, insecticides, liquid soaps, floor scrub, floor waxes, and the like, — price advances by manufacturers will average out from 3 to 4 cents per gallon. Some manufacturers are jacking up prices as much as 5 cents. Thus it goes.

• • • • •

Charley Freedman of The Mantrose Corp. of Brooklyn had a big month in September. First he completed 35 years in shellac technical sales for Mantrose on Sept. 1. Second, he celebrated his 35th wedding anniversary on Sept. 11. Also, Charley told us his first granddaughter was born July 8. Up until then, plenty boys in the family, but no girls. Now, Miss Carol Poris has arrived to boss the family. We thought some of his pals in the floor wax trade would be interested in knowing about Charley's new boss, two months old.

• • • • •

Two-and-a-half tons of glue and not a single nail are being used to build a giant sports arena at Commack, Long Island. The ceiling is 65 feet high and the building, 350 feet long, when completed will seat 7,000 persons. The glue is of a special waterproof variety, one of the family of Penacolite Adhesives manufactured by the Chemical Division of the Koppers Co., Pittsburgh. So tough is the glue that the wood will tear apart before the glued sections will separate. Commack is a small town located about 40 miles from New York.

• • • • •

If old sour puss, the editor hadn't nixed the idea, we were going to run a shot of Ginger Rogers, actress and glamour girl, on our front cover this month and really liven up this rag. They sent us her picture along with a release telling how she uses Lustre-Cream Shampoo and Lustre-Net Super Soft Spray every day to wash her hair and keep it in place. And it tells about no waste time in hairdressers' salons for Ginger, just Lustre-Cream every day. We figured this beautiful babe as a "natural" for a cover shot. The editor thought otherwise.

• • • • •

Wildroot got under way again September 3 with its late-night television spot commercials in a number of big markets. The advertising is handled by Batten, Barton, Durstine & Osborn, Inc., N.Y., otherwise known as BBD&O. In our book, their commercials in the past have been among the best on the air, especially the two dandies who dance and sing "Wildroot Cream Oil Charley."

• • • • •

One of our boys recently attended an outing held by one of the big sanitary supply firms of Philadelphia. One of the prizes donated for golf and sundry other athletic events was a case of toilet tissue by Scott Paper. He won it. Recently he had word from Scott asking what color he wants, green, blue, pink, or yellow. He's having a really tough time making up his mind.

"And there's our gift scheme—550 empty packets, and we send you a beautifully inscribed certificate to say you're barmy!" (Clipped from an Australian newspaper by P. Munn of Adelaide, S. Australia.)

• • • • •

Gillette, who sell a whale of a lot of razors, blades and shave cream, not to mention the products of the Toni line for ladies, will telecast the World Series next month for the sixth consecutive year. The cost? $1,250,000. But this is the last year of this bargain (?) rate for telecasting. Next year, the figure jumps to $3,250,000 for rights alone, — probably a total cost of five million. For our dough, we'd spend the money in newspapers and magazines, not for fleeting seconds on the air waves. But, maybe we're prejudiced.

• • • • •

Later this month, the Chemical Specialties Manufacturers Assn. board meets at the Oyster Harbors Club at Osterville, Mass. down on Cape Cod. The program calls for board meetings at 8:30 A.M. on two days. When questioned about starting meetings at such an unearthly hour, Doc Hamilton, CSMA secretary, allowed as how "this is a working association and there is plenty of work for the board to do, — not to mention committee meetings." Sort of a slave driver, ain't he?

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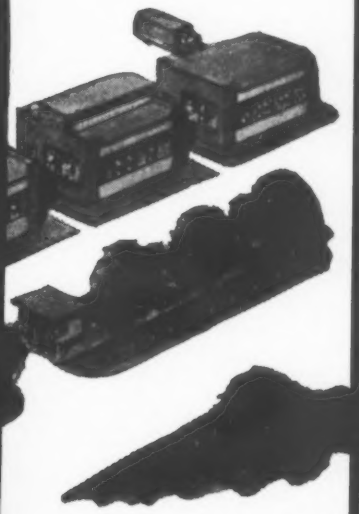

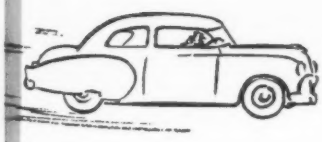

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